Please Check and Pass On

Don't Delay	See Page
Mr.	
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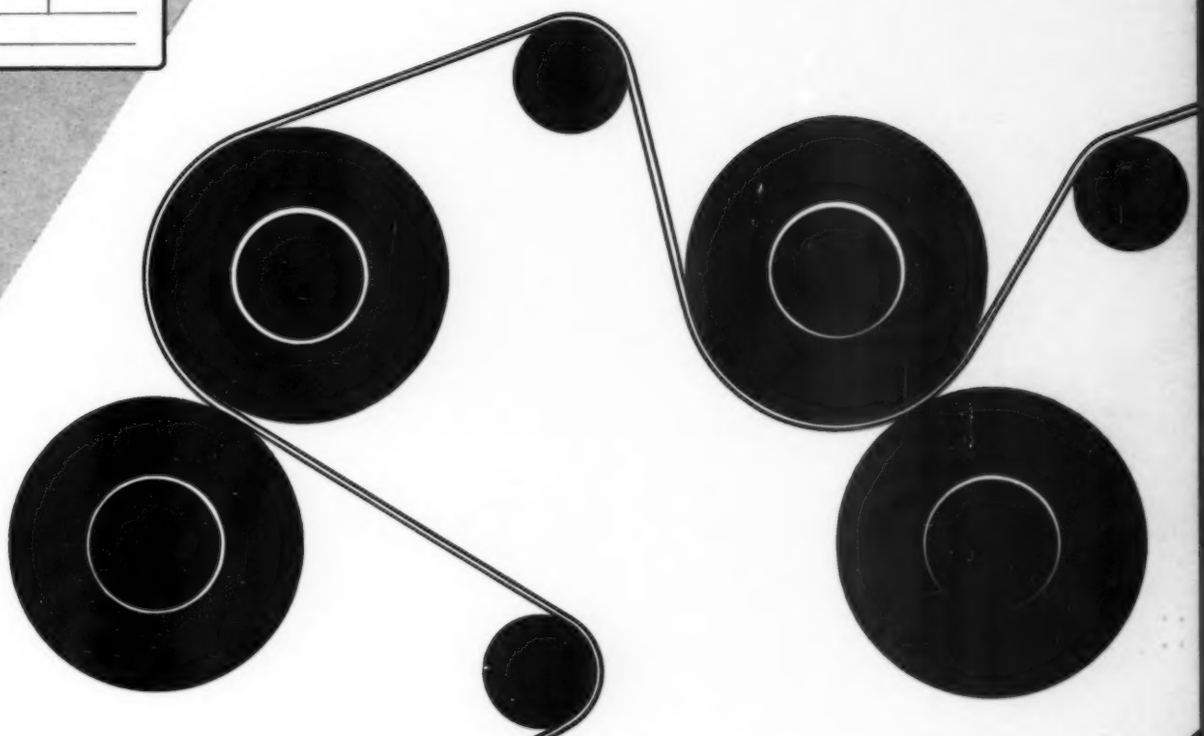
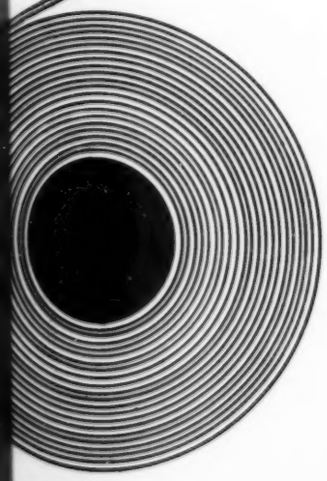
For filing, return to _____

February 1956





PRINTING EQUIPMENT *Engineer*

an industry-wide technical publication

Effective February 1, 1956

The Name of

LINOTYPE PARTS COMPANY, INC.

was changed to

STAR PARTS, Inc.

For over thirty years, we have grown and prospered under the name LINOTYPE PARTS COMPANY, INC. However, confusion between our name and that of the Mergenthaler Linotype Company has increased.

It has therefore been mutually agreed that clarification of our name will be beneficial to both companies and to the graphic arts industry in general.

No change in ownership, management, personnel or company location is involved.

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★ Precision TRADE ★ MARK Parts ★

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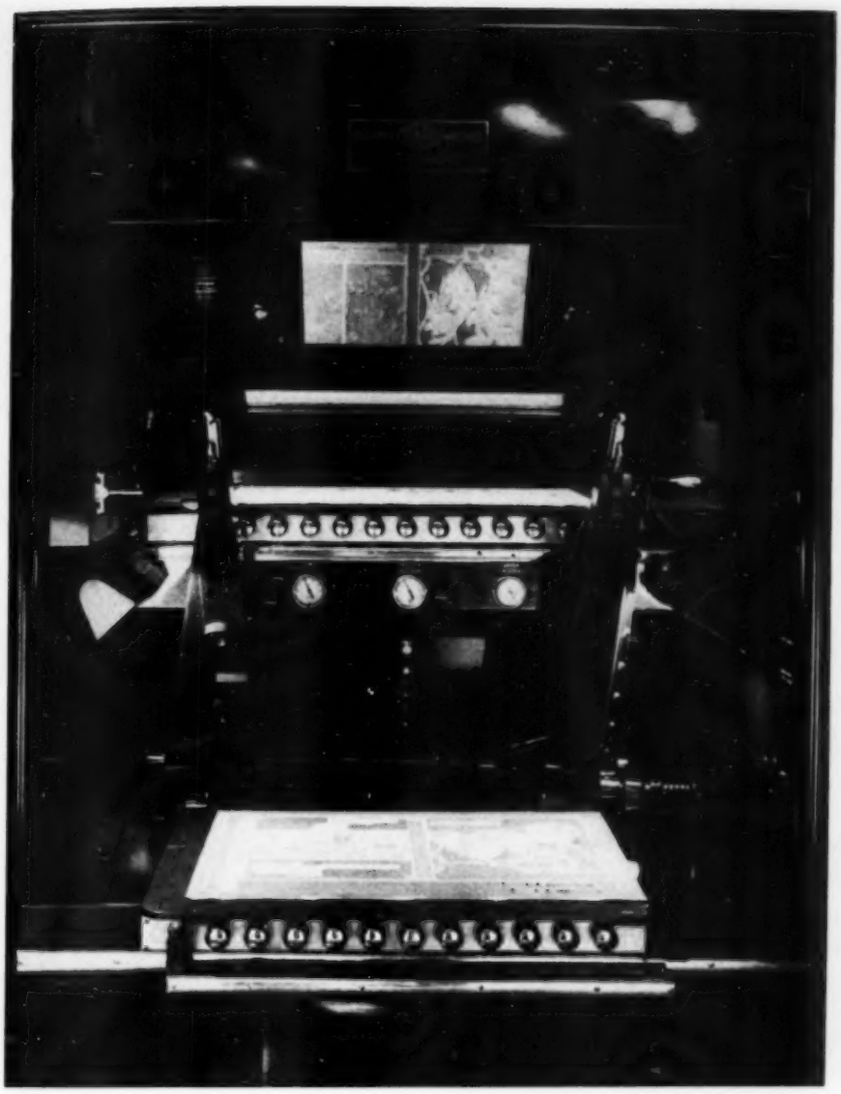


closeup of a business machine

COLOR printing in newspapers is big business—and getting bigger . . .

To produce it profitably requires the know-how of skilled craftsmen plus precision machinery engineered for the job.

The Sta-Hi Master Matcher, pictured above, is the "key machine" in a specialized line of Sta-Hi stereotype color registering equipment now in operation in many progressive publishing plants. With it you can establish accurate register marks on color mats by image-to-image visual comparison of printing areas.

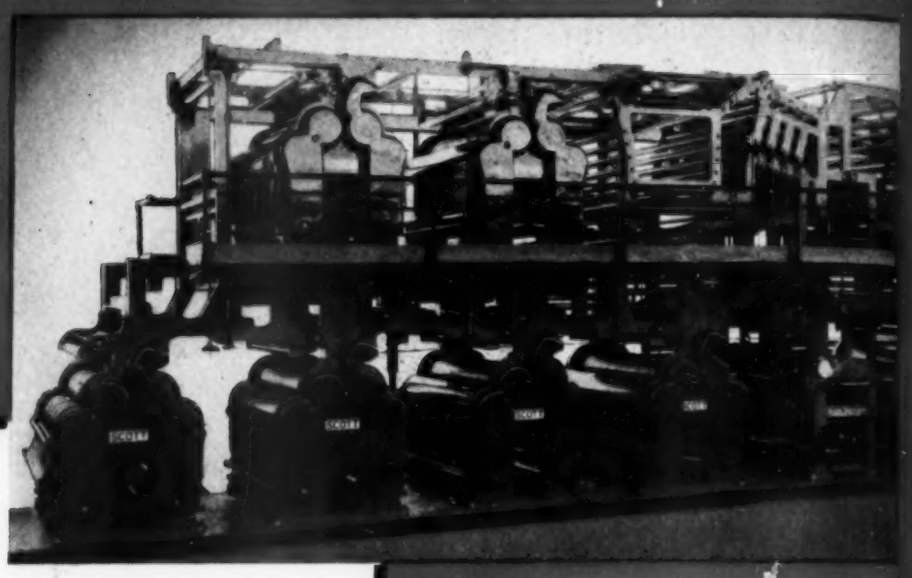
It might be "good business" to let us tell you how this Sta-Hi equipment can help *you* in *your* color operation . . . Just drop us a line.

Sta-Hi Corporation

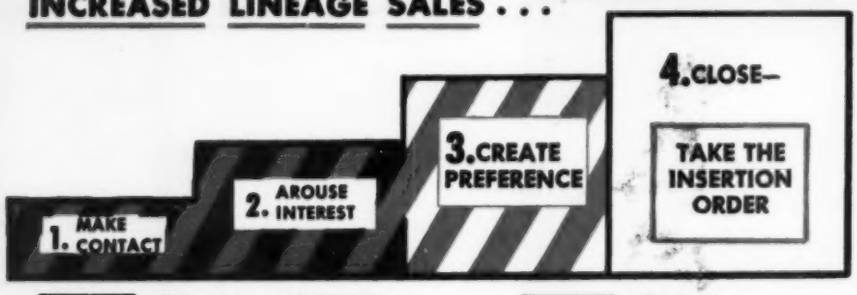
WHITTIER • CALIFORNIA

COLOR *with* SCOTT PRESSES

creates "PREFERENCE"



CLIMBING THE LADDER TO INCREASED LINEAGE SALES . . .



ABOVE: Scott Octuple Press with 4 color printing couples superimposed over black units. Gives full color printing without losing any black page capacity.

"Color Creates Preference!" Ad men from every part of the country endorse color as the most effective lineage booster on the newspaper scene today . . . a sure sign of the modern newspaper organization.

The desirability of color comes hand-in-hand with the need for full-tone, perfect register, high-speed production. And installed color capacity has to be just right — Do you want to spot one color with varying black page capacity?—Do you need black plus independent four-color capacity? — These decisions tell you what your press needs will be. No compromise in design or arrangement should be made . . . none is necessary with Scott "Extra High-Speed" press.

Whether a single unit with a Scott Reversible Drive (a flick of a lever for color arrangement) is best for you, or multi-combination presses for variable four-color location, Scott engineers can advise and equip your pressroom. Reliable, modern standardized design — superior quality high-speed color reproduction from feed to folding; these are experienced proved facts, not claims.

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PLAINFIELD, NEW JERSEY

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about color register control

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February 1956

An industry-wide technical magazine published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in the commercial, magazine, private plant and daily newspaper fields, covering major processes.

PRINTING EQUIPMENT Engineer

Volume 86 **Number 5**

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MANUFACTURERS OF
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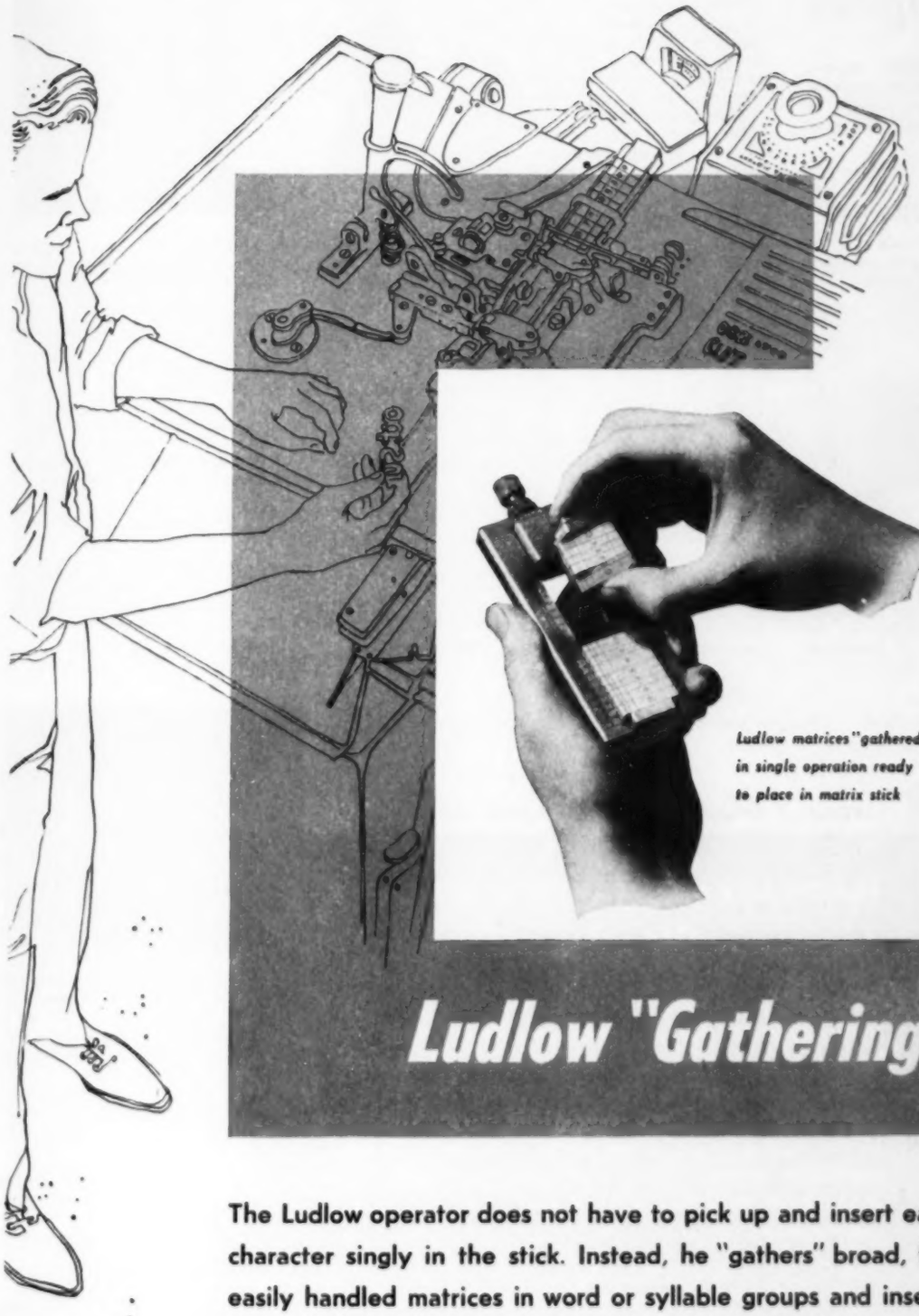

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for dependable production of leads, slugs, rule, plain border and base material

Ludlow matrices "gathered" in single operation ready to place in matrix stick

Ludlow "Gathering"

The Ludlow operator does not have to pick up and insert each character singly in the stick. Instead, he "gathers" broad, flat easily handled matrices in word or syllable groups and inserts them in the Ludlow matrix stick as a single unit. This helps to improve composing room production. Send for free literature.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

Equipment and Supplies

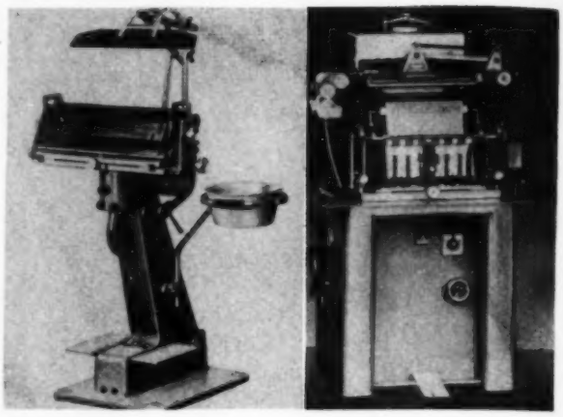
If you wish additional information concerning equipment, supplies and/or technical literature, please make your request to PRINTING EQUIPMENT Engineer, 1276 West Third St., Cleveland 13, O.

Contact Printer Developing Unit

The Model 356 Heccokwik Developing unit for use with any contact printer has been introduced by

Hunter Photo Copyist, Inc. The unit, useful in producing positives from negatives exposed on the Heccokwik Bookmaster, eliminates the need for special darkroom and developing facilities. The machine is of stainless steel construction, permanently affixed guides, and automatic turnoff when the cover is lifted. Cover lifts from one side to expose rollers and pre-positioned tray. The unit connects to any 110 v., a.c., 60 cy. outlet. For further details, please mention PEE No. 49 in your request.

Gane Binding Machines



—Two binding machines are now being offered by Gane Bros. & Lane, Inc.; one a hand operated unit and the other semiautomatic. Both models operate on the fanning principle. A cold synthetic adhesive is applied between the sheets in a fine film. To assure adhesion the sheets are fanned both ways. A maximum output of 300 books per hr. is claimed for the semi-automatic model, and about 90 per hr. with the hand operated machine. Both machines will be called Flexibook Binders. Special adhesives are furnished, and adhesive penetration between the sheets is said to be minute to eliminate excess swell. For further details, please mention PEE No. 52 in your request.

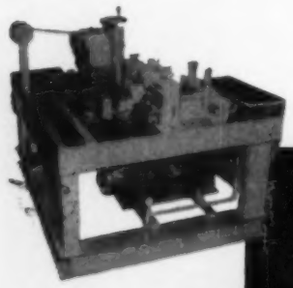
Adhesive Coating Machine

A small size model of the Williamson Tapemaker, an adhesive coating machine for making pressure sensitive Cellophane tape, has been announced by the manufacturer, Williamson Adhesives, Inc. For use in sealing, labeling, packaging, binding, strapping and wrapping operations, the unit is used to produce continuous colored or clear tape. The unit may be stopped and started again for any length of tape. The Tapemaker is enclosed in a metal cabinet which can be placed on a table, stand or floor. For further details, please mention PEE No. 45 in your request.

Collator Feed Roller

A rotating feed roller is now standard equipment on all models of electric powered and mechanical Thomas Collators according to Thomas Col-

(*Continued on Page* 12)



Heavy duty cross feed magazine labeling machine with rotary head.

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MAGNACRAFT MAKES A MACHINE

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Wrapping or labeling . . . Magnacraft does either or both operations for you *faster* and *better* than ever before! *Magnacraft has sold more magazine wrapping machines than all other manufacturers combined!* Our experience can help you with the proper selection of the right labeling or wrapping machine to fit your particular needs. Find out for yourself how Magnacraft machines will cut your costs and reduce your mailing time!

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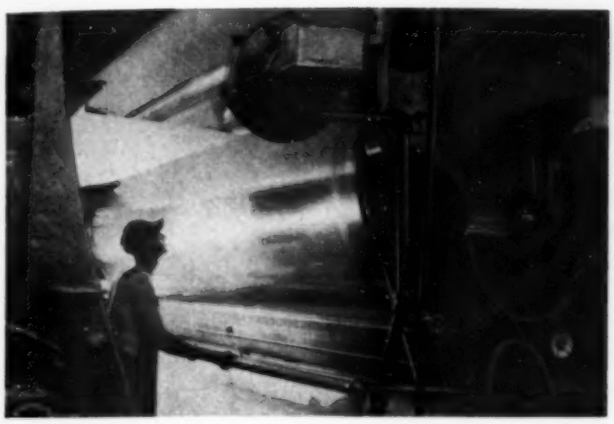
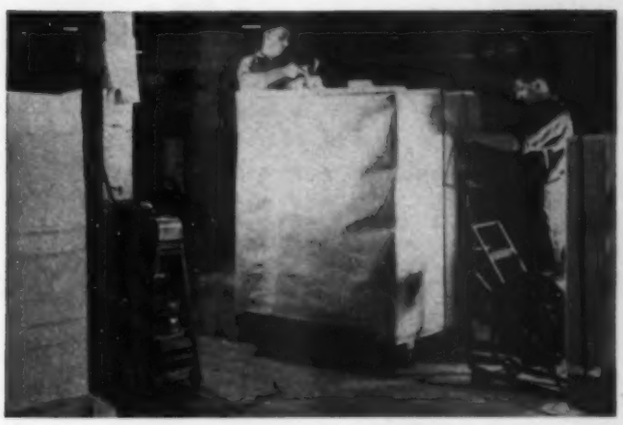
MEAD PAPERS RUN EASILY BECAUSE THEY LIE

FLAT



1. IT STARTS WITH MANUFACTURING

Paper doesn't just naturally lie flat. It has to be made that way. It takes the skill of an expert machine tender to produce paper free of the initial strains that cause curl. It takes calendering know-how to make a roll of flat coated paper. And before, during and after the manufacturing process, it takes a series of tests and inspections to make sure every sheet will lie flat and the sheets or roll will give you troublefree runs.



2. IT CONTINUES THROUGH THE FINISHING OPERATIONS

To be conditioned to the proper moisture content for nation-wide use, paper must be carried through the mill's finishing operations. Here Mead Mills use temperature controlled atmosphere; the paper is exposed only to conditioned air. Tight edges and wavy surfaces are impossible under these ideal conditions. But the next problem is to maintain the moisture content until the paper reaches your pressroom.

3. AND EVEN IN YOUR PRESSROOM

Our finishing department's slogan is, "The customer is the next inspector." Paper conditioned by Mead methods lies flat and shows a minimum of stretch or shrink in any press-room; but that is another story. To preserve these conditions in transit or storage, a paper moisture-barrier wrap is employed on every package or skid: the famous Mead moisture-proof wrap that brings you Mead Papers in mill condition.

You will find Mead Papers easy to work with, because we have done everything possible to make them lie flat and feed well. When you need troublefree runs and a diversified line of papers for letterpress, offset and gravure printing, you can get it all from Mead, Papermakers to America.

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Newspapers are printing direct from original halftone engravings produced on a Fairchild Scan-A-Graver to eliminate the loss of detail that results from matting and stereotyping.

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Fairchild representatives will be glad to show examples of direct printing and demonstrate how to get better quality with Scan-A-Plates®.

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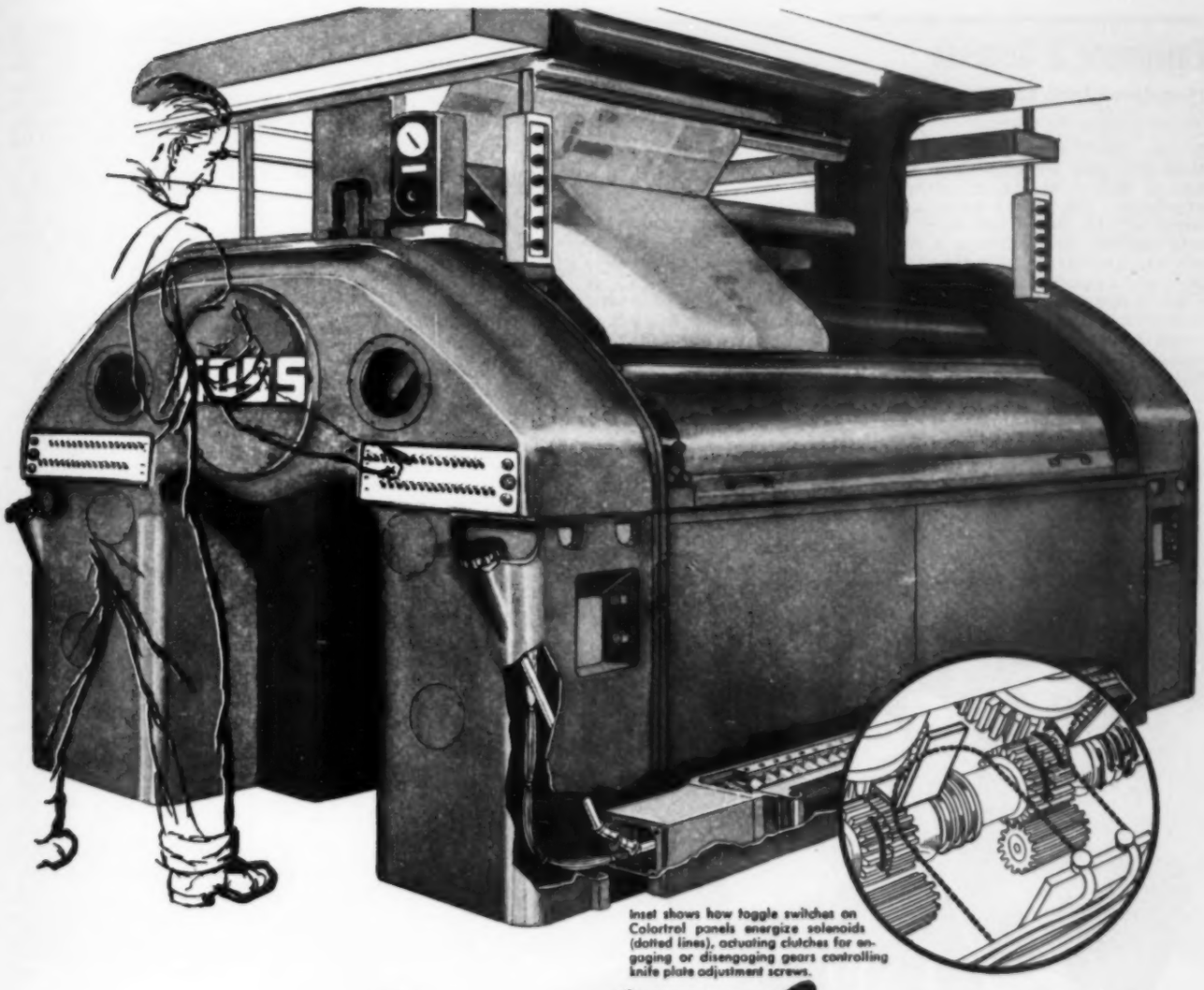


Inset shows how toggle switches on Colortrol panels energize solenoids (dotted lines), actuating clutches for engaging or disengaging gears controlling knife plate adjustment screws.

HEADLINE *Colortrol*

FOR FINEST PRINTING

Goss *fingertip* COLORTROL gives positive ink control, instantaneously. Simply flip the toggle switches for the desired columns and turn the handwheel to increase or decrease the flow of ink to one or more columns or for an entire page *simultaneously*.

COLORTROL provides page shut-off by a mere turn of the handwheel. Color may be pre-set, with a saving in time and a reduction in paper spoilage.

Waist-high panels eliminate kneeling and shoulder-high panels (for color decks) eliminate climbing when adjusting ink.

COLORTROL—with Goss CONTINUOUS INK FEED—assures unexcelled reproduction of all tones in black and ROP color printing.

New COLORTROL is pre-engineered to provide for all changes in page widths at any time in the future.

- ✱ **Accurate**
- ✱ **Instantaneous**
- ✱ **Convenient**

THE GOSS PRINTING PRESS CO.

5601 West 31st Street • • • • • • Chicago 50, Illinois

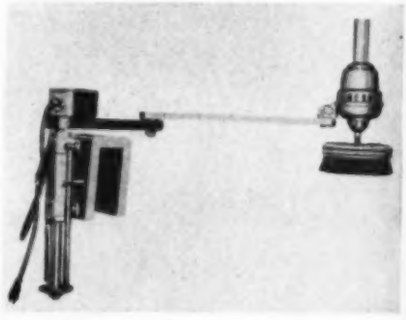
Equipment & Supplies

(Continued from Page 8)

lators, Inc. With the Feed-Roller each bin will accommodate an average of 50% more paper, states manufacturer. On some models a full ream of 16 lb. paper will now fit into the bin. By touching a foot button on mechanical models the feeding mechanism is activated. The Feed-Roller locks on the forward motion which slips the top page of each stack towards the operator. The operator, after grasping the stacks, touches the foot button which retracts the Feed-Rollers. The Feed-Roller re-aligns the sheets in the tray, then unlocks and rotates on the way back to the feeding position. The Feed-Rollers are part of the overall feeding mechanism which can be automatically adjusted to accommodate any sheet size up to 20 in. by 17 in. For further details, please mention PEE No. 55 in your request.

Presensitized Plate Reclaimer

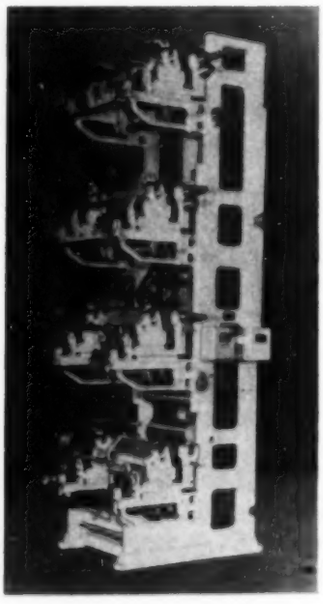
Handy Andy, operating from any 110 v., a.c. outlet, is being manufactured by Reproduction Research Laboratories, Inc. for salvaging used presensitized plates. Attached on the back, ends or front of the platemaker's sink, the Handy Andy is said to result in even resurfacing with no polished spots. The machine is engineered to simulate the motion of the human arm and hand, but the brush arm is regulated by spring tension and ball bearing shaft sleeve that keeps the brush from gouging or scratching. The operator guides the Handy Andy over the plate. Vertical stroke of the 6 in. brush is 6 in. and the radial swing of the brush arm is 40 in. Plates up to 25½ in. by 36 in. may be cleaned with this model. A larger model with a 12 in. brush is also available which will



clean plates up to 77 in. Brushes on both models are made of hair and Nylon. The brush rotates at 400 r.p.m. After the Handy Andy is attached, the entire arm may be lifted from the mounting bracket when not in use. If desired, the bracket may also be removed with the thumb screws provided. For further details, please mention PEE No. 50 in your request.

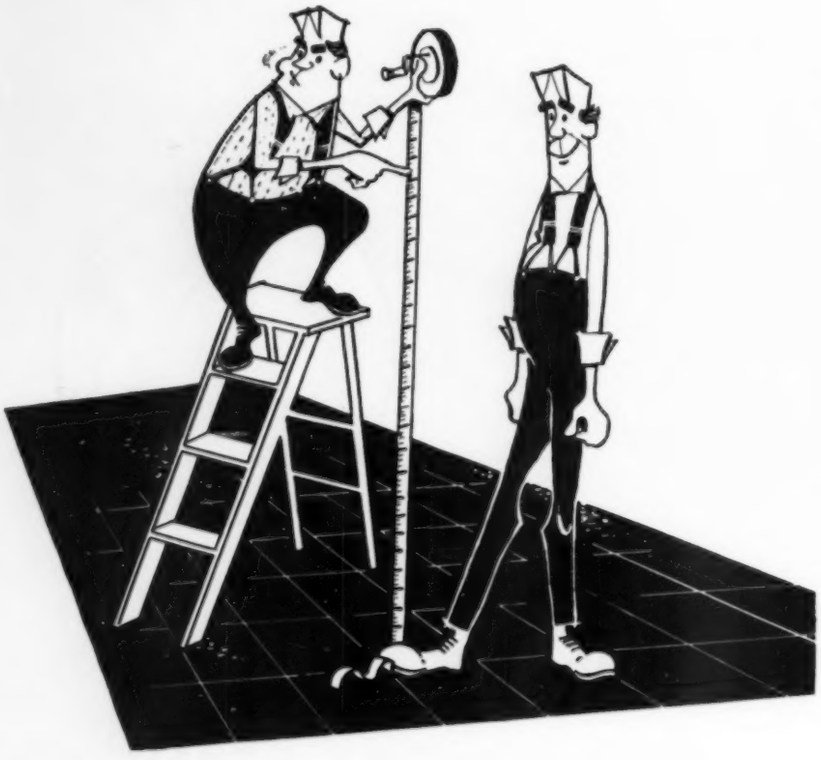
Vertical Flexographic Press

A vertical four color flexographic printing press, designed to fit between a polyethylene film extruder and a bag maker, has been an-



nounced by Manhasset Machine Co. The 10 ft. high press, which occupies less than 2 sq. ft. of floor space, is designed to permit continuous two color printing of film without any down time for changeover from one design to another. While the machine

(*Continued on Page* 16)



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Manufacturers and Distributors of
Burgess Chrome and Tone-Tex Mats
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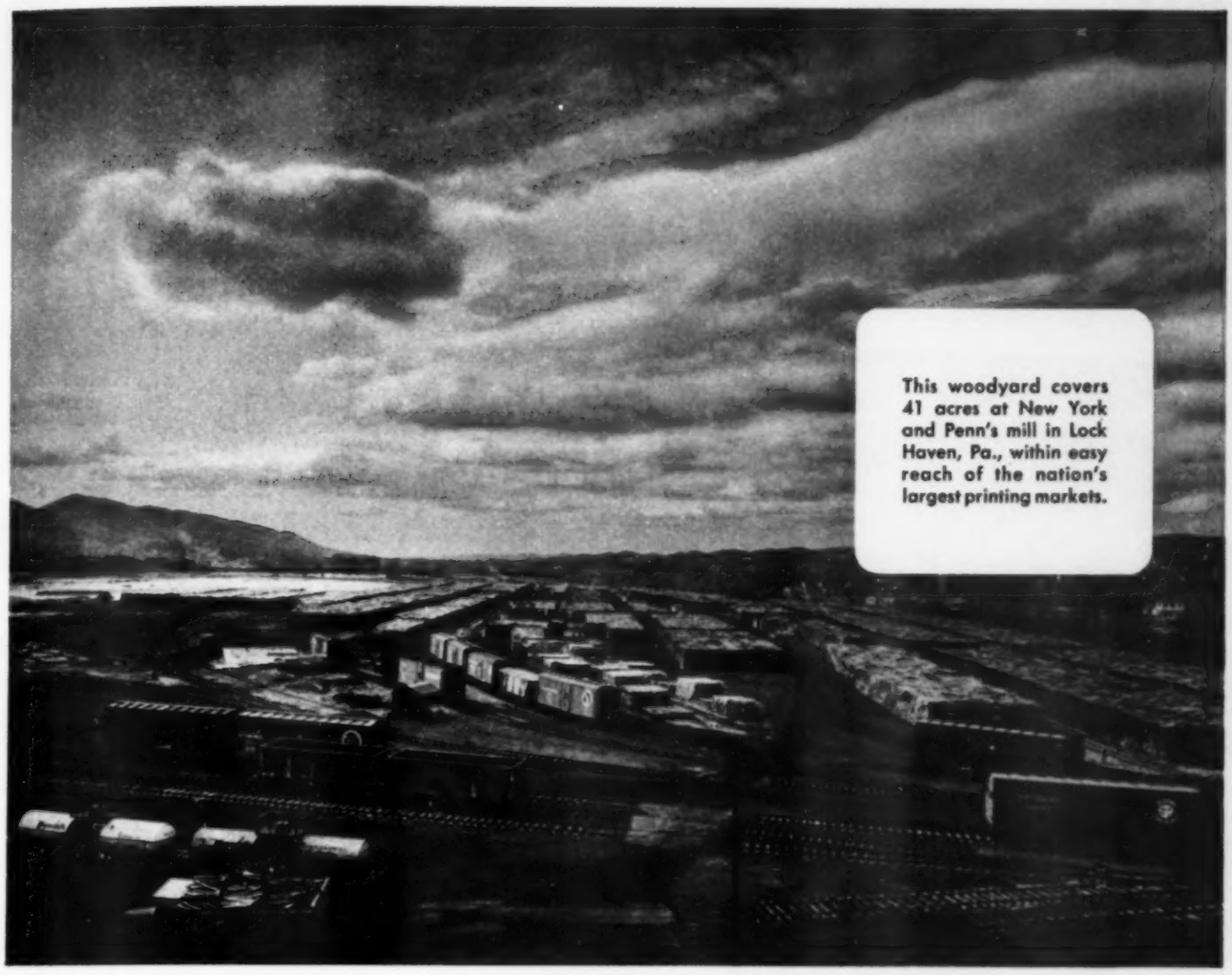
BURGESS Chrome MATS



This woodyard covers 41 acres at New York and Penn's mill in Lock Haven, Pa., within easy reach of the nation's largest printing markets.

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Oak is just one of the woods that New York and Penn farms for its harvest of fine papers. And because New York and Penn produces 80% of its own pulp you can be sure that their natural resource larder is never empty. Tomorrow's paper crop is already growing in scientifically-managed New York and Penn woodlands and on the lands of nearby independent tree farmers.

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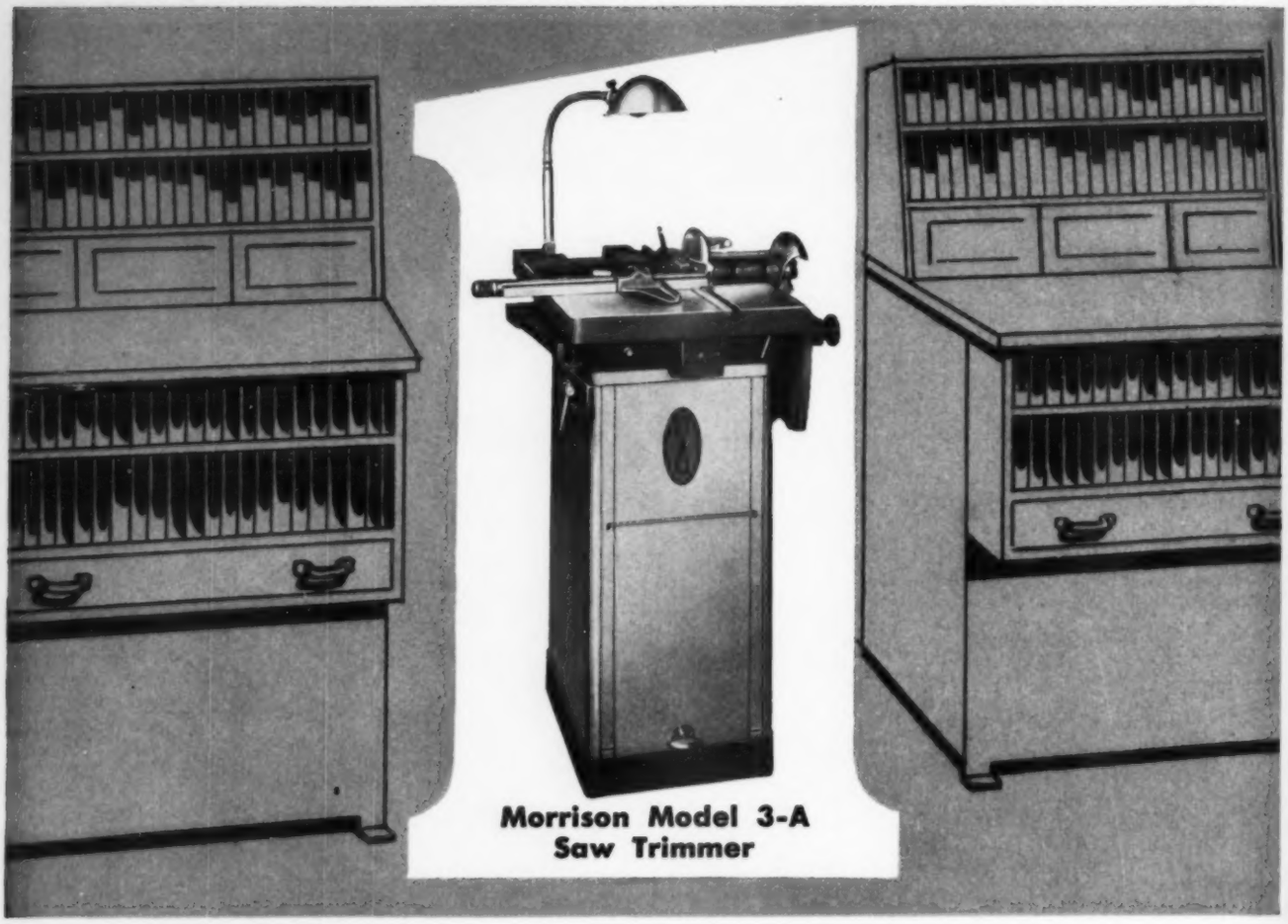

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. . . The Nation-wide Standard of Composing Room Economy

• • • • • • • • • • • • • • • • • •

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Symbol of Operating Economy

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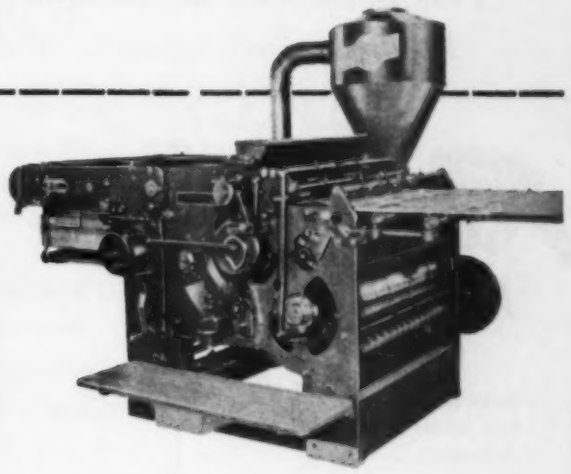
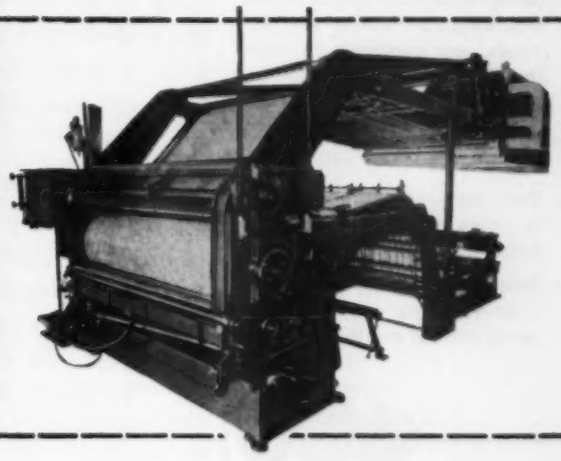
Machinery, built to do more jobs . . . better!

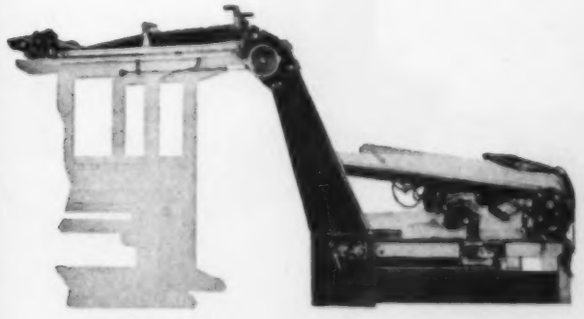
BRONZING Equipment will bring new jobs into your shop and a Christensen High Speed Bronzer attached to your press will mean increased profit with low operating costs. Matches the practical running speed of your press exhauster reclaimer keeps bronze out of the press room and in the machine.



VARNISHING of labels, magazine covers, circulars and gift wrappings enhances both product appearance and profits. The Christensen Varnishing Machine operates at almost twice the speed of any other present varnisher. Dual level oven decreases floor space required. The Christensen will handle paper or board in widths up to 78 inches.



STREAM FEEDING with the Christensen Continuous Feeder means no stopping of the press . . . more printed sheets per hour. Improved register because sheets arrive at register position at one sixth the speed of sheet by sheet feeders. Floor loading reduces operator fatigue, reduces loading time, eliminates stairs and platforms.



DEXTER FOLDER COMPANY

General Sales Office

330 West 42nd Street New York 36, N. Y.

ILLUSTRATED CIRCULARS ARE AVAILABLE FOR ANY OF THE ABOVE MACHINES

DEXTER

Save HALF Your Saddle Stitching Costs!

This is no trick at all when you use the Rosback Auto-Stitcher. Want proof?

Rosback®

Auto-Stitcher Features

- Basic machine has two stitching heads and slide stacker delivery.
- Seven accessory attachments, including continuous belt delivery, are available to meet the requirements of printing plant or bindery of any size.
- Low in price—less than half that of any gang stitcher.
- Cuts costs—as much as 50% or more when compared to hand stitching.
- Handles short runs at low cost—saves tying up expensive gang stitcher equipment.

One experienced user reports:

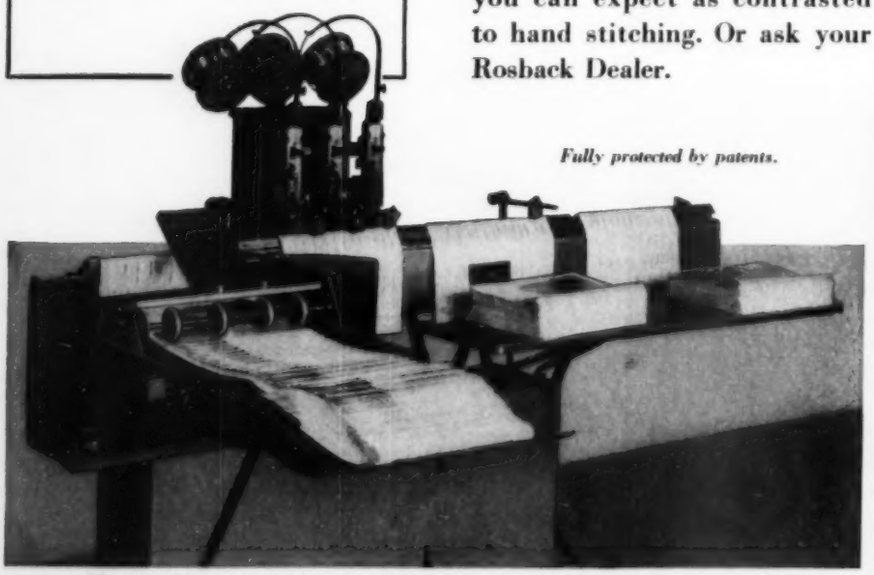
"Using our Auto-Stitcher two girls now do in eight hours what formerly took five operators working eleven hours. That's a clear saving of 70% in direct labor alone!"

Can you think of any easier way to cut costs and earn *extra* profits in *your own* business?

It costs you nothing to find out about the Auto-Stitcher and how it makes possible such valuable savings. And there's no obligation.

Send us samples of your average stitching jobs. We'll gladly give you complete description of the Auto-Stitcher and a careful, conservative estimate of the savings you can expect as contrasted to hand stitching. Or ask your Rosback Dealer.

Fully protected by patents.



The Auto-Stitcher shown here is equipped with a third stitcher head, continuous belt delivery and second feeding station.

F. P. ROSBACK COMPANY • Benton Harbor, Mich.

WORLD'S LARGEST MANUFACTURERS OF PERFORATORS, WIRE STITCHERS AND PAPER PUNCHING MACHINES

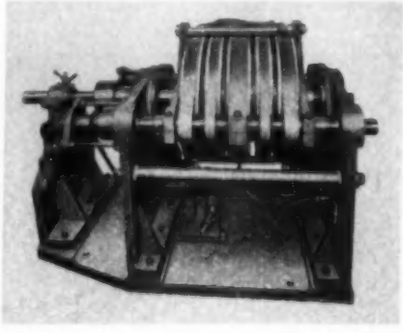
Equipment & Supplies

(Continued from Page 12)

is printing one two color design the remaining two printing stations are made ready for the next job. At the appropriate time, the first two color units are disengaged and the second pair is brought into contact with the moving web. Freshly extruded film and printing continue uninterruptedly at all times. Two or three printing impressions are missed during the changeover between jobs. Use of the press makes it possible to control the number of impressions to eliminate over-runs, states sponsor. According to Manhasset, in-line printers of this type can be made in either vertical or horizontal frames, in printing widths of 12 in. to 26 in. For further details, please mention PEE No. 53 in your request.

Kidder Winder and Rewinder Brake

Kidder Press Co., Inc.'s unwind braking equipment is now available on all models of Kidder winders and rewinders requiring higher braking



capacity. The water cooled unit is designed to accommodate either 15 in. or 20 in. diameter braking ele-

(Continued on Page 20)

SOLD BY

Western Newspaper Union

E. C. Palmer & Co.

Harry W. Brintnall Co.

ANY LETTERHEAD will look better on WESTON BOND

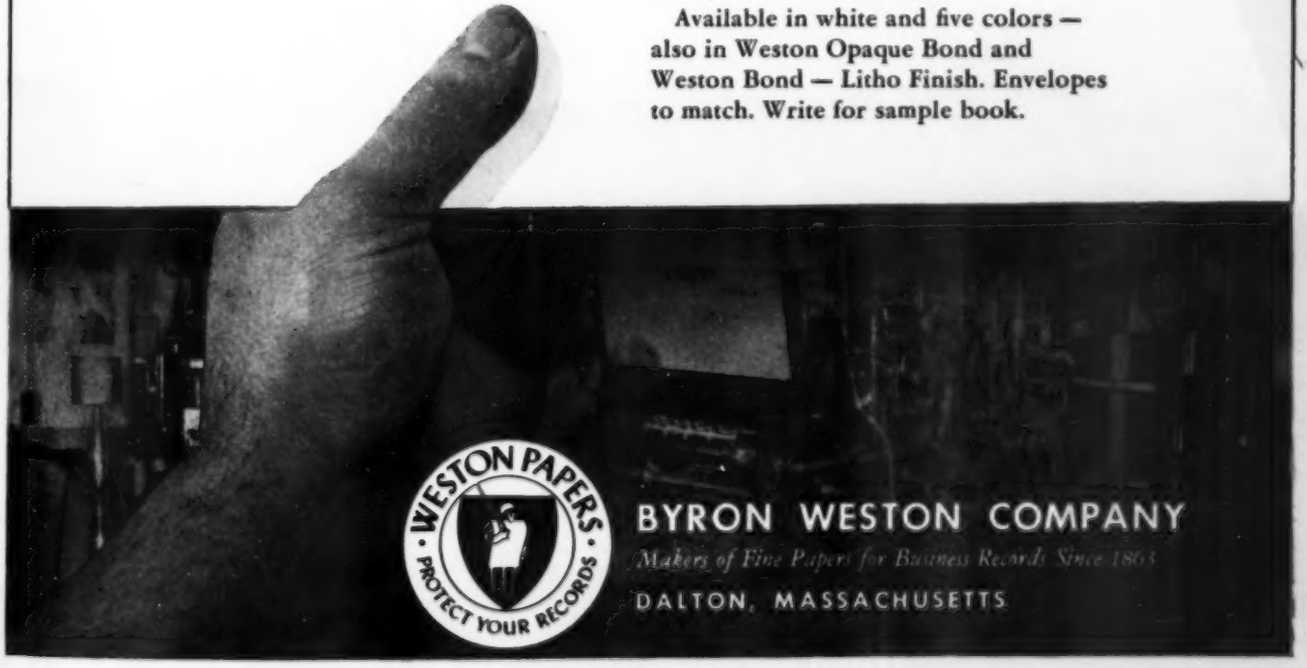
brighter, whiter

25% RAG CONTENT

You'll like the tough, crisp, substantial feel of Weston Bond . . . the slick way it slides through the press . . . the way it serves and saves on any job calling for a quality bond paper at moderate cost.

Best of all, you'll like the brilliant whiteness that makes the letterheads *you* print look worth a whale of a lot more than you charge for them.

Available in white and five colors — also in Weston Opaque Bond and Weston Bond — Litho Finish. Envelopes to match. Write for sample book.



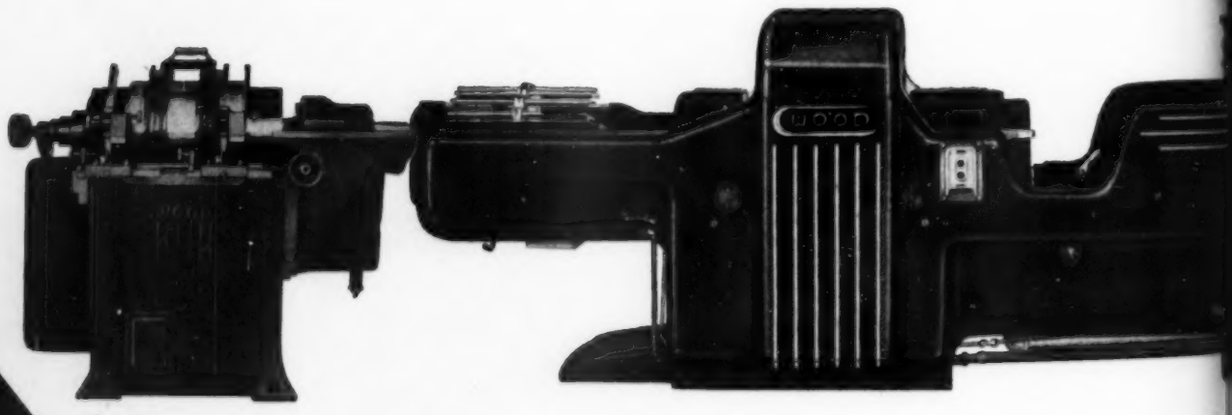
BYRON WESTON COMPANY

Makers of Fine Papers for Business Records Since 1863

DALTON, MASSACHUSETTS

THE WOOD HEAVY DUTY PONY AUTOPLATE AND AUTOMILLER

Close coupling of the Automiller to the NEW Heavy Duty Autoplate Machine minimizes overall length of the installation. Attach your pressroom conveyor to the tail of the Automiller for straight-line plate delivery . . . without lifting.



Wood

A combination of the WOOD, NEW Heavy Duty Pony Autoplate Machine and the WOOD Automiller is ideal for producing tension lockup plates, of a better quality, at a higher rate of speed, and with greater uniformity.

In the NEW Heavy Duty Pony Autoplate Machine, color mats are positioned to conform to register marks located on the casting box. A vacuum device holds the mats firmly in place and eliminates shifting during the entire casting cycle. All of the operations on the color plates, including casting, tail cutting, shaving, cooling and drying are performed without lifting the plate from the machine, thereby assuring uniformity.

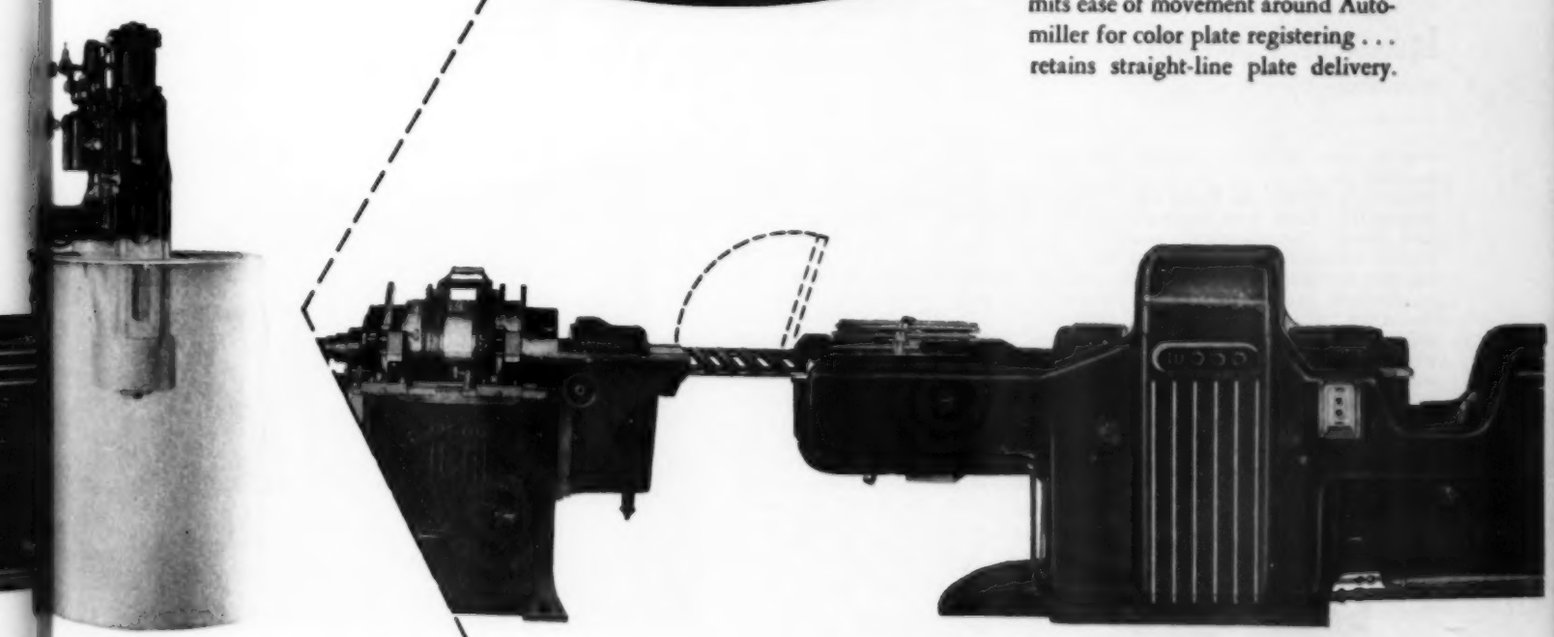
The finished plate may be slid onto the Automiller *without lifting*. The Automiller may be equipped with the Pre-Registering Attachment, so that the several *color* plates can be trimmed in proper register between the printing surface and the milled pockets, which are cut into the plate on the Automiller by a gang of four rotating milling cutters. All of the eight pockets are cut in a plate in less than 25 seconds.

TESTED and PROVEN in the field!

25 NEW HEAVY DUTY PONY AUTOPLATE MACHINES

58 AUTOMILLERS..40 EQUIPPED WITH PRE-REGISTERING ATTACHMENTS.

Introduction of hinged conveyor permits ease of movement around Automiller for color plate registering . . . retains straight-line plate delivery.



WOOD NEWSPAPER MACHINERY CORPORATION

PLAINFIELD, NEW JERSEY • Executive & Sales Office: 501 Fifth Avenue, New York 17, N. Y.

LOW COST, FULL PAGE

STEREOSAW

The NOLAN Heavy Duty StereoSaw is powerful, smooth operating and offers maximum efficiency. It was designed in cooperation with leading stereotypers to meet the demands of daily newspapers and large printing plants, yet it costs much less than similar saws.

Extra large saw table, 28" x 36" takes a full newspaper page; controls are conveniently located at front of machine; heavy-duty 2-HP motor; double V-belt drive; 10" dia. blade; rugged construction throughout; many safety features.

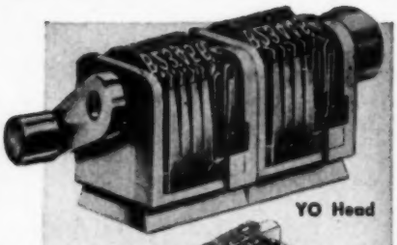
Write today for complete information on the NOLAN Heavy-Duty StereoSaw to:

NOLAN Corporation DEPT. 22 ROME, NEW YORK

Number for Profit

STRIP TICKETS

COUPON BOOKS

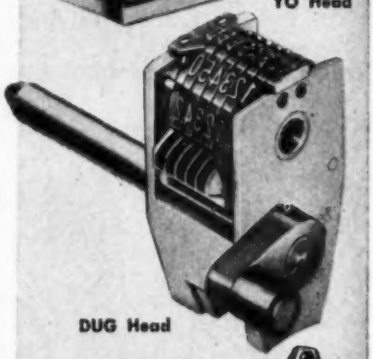


YO Head

FORCE Rotary Heads Center-Driven

Enjoy fast, profitable ticket and coupon numbering with equipment designed for the work. Let us send more information about Force Center-Driven Heads.

● Write for Force Rotary Head Operating & Maintenance Manual



DUG Head

WM. A. FORCE & COMPANY, INCORPORATED
216 NICHOLS AVENUE, BROOKLYN 8, N. Y.

Equipment & Supplies

(Continued from Page 16)

ments and is also adapted for assembly as a 2, 3, or 4 disk unit. Braking action is controlled pneumatically from the operator's control panel. Satisfactory operation requires compressed air at 30 lbs. per sq. in. maximum pressure. Standard equipment includes a water pressure reducing valve, permitting connection to any available water supply for cooling. For further details, please mention PEE No. 48 in your request.

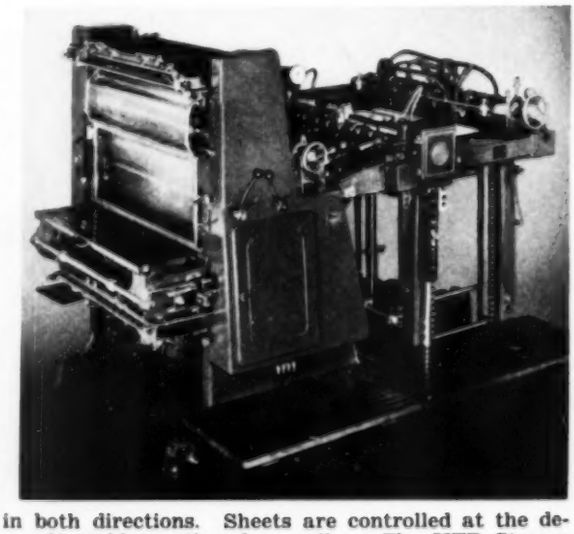
Carbide Tipped Blade

A tungsten carbide tipped cutter for trimming stereotype plates in the

Pony Autoplate machine has been announced by American Wood Products & Tool Supply. The blade is designed to meet this particular application and produces many cuts without dulling or filling up with metal. The company reports cutters have been thoroughly tested in the field. It is also reported that blades installed over two years ago are still in operation without sharpening. The

(*Continued on Page* 26)

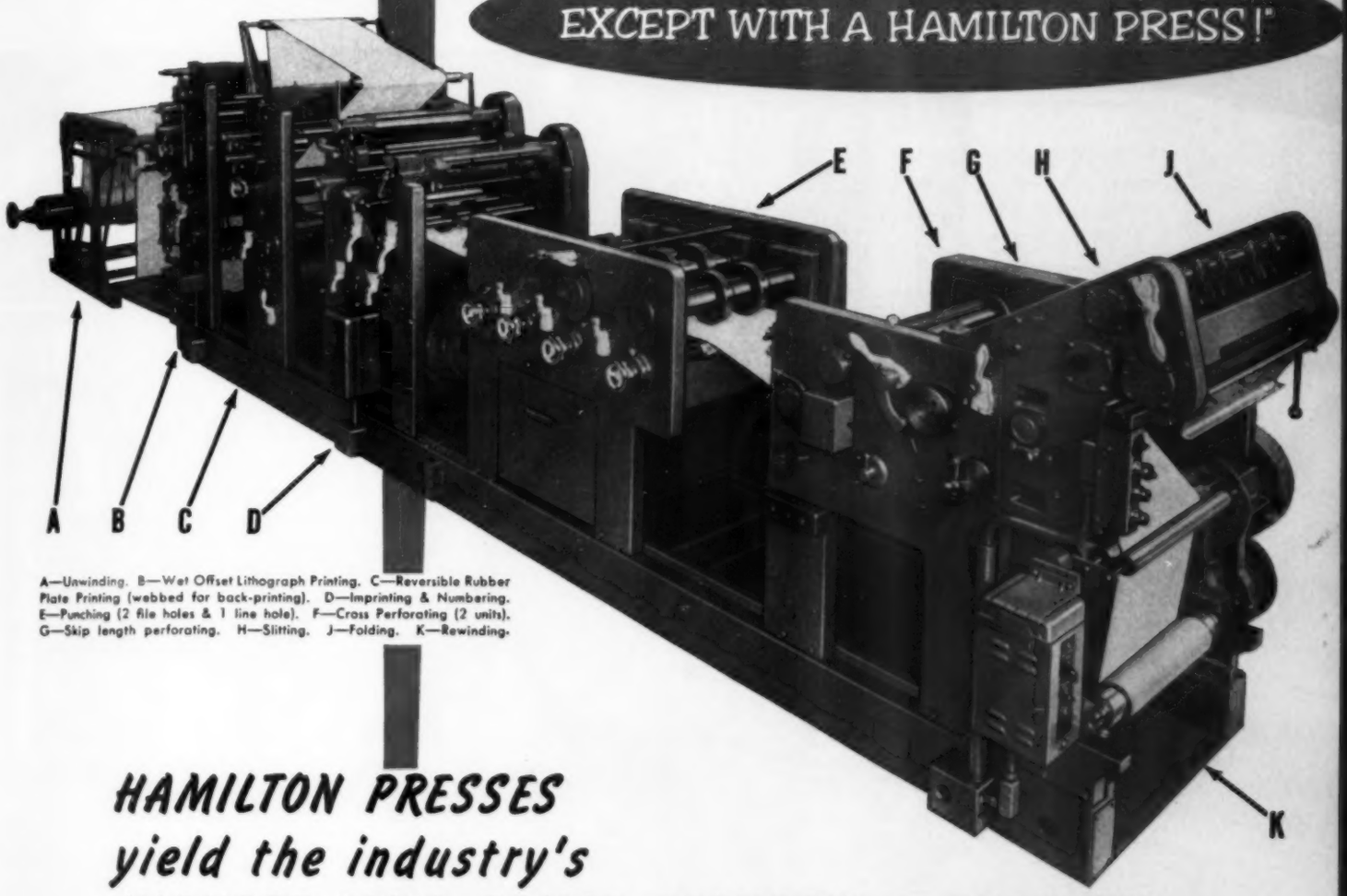
ATF Offset Press — American Type Founders announced an offset press in the 22 in. by 34 in. size range, the ATF-Mann N-135. Speeds up to 7000 i.p.h. are claimed for the N-135. Press is constructed with Floating Impression (no bearer to bearer contact) and Sustained Register. Minimum sheet size is 11 in. by 15 in.; maximum size 23 in. by 36 in. Stock is handled from onion skin to 0.028 in. card. Maximum printing area is 22½ in. by 35½ in. Cylinders are mounted in phosphor bronze alloy bearings. The Swing-arm mechanism on the feeder is cam controlled in both directions. Sheets are controlled at the delivery for jogging with an adjustable suction drag roller. The HTB Stream Feeder is utilized to deliver a stream of paper to the four front guides and the pull type side guides. Should a sheet arrive at the head stops too soon, an early sheet detector trips a micro-switch which automatically stops the press. Other features on the N-135 include: Roller adjustments with hex-head bolts; positive, gear driven vibrator roller drive; copper plated steel drums and riders; three to one water motion; Plexiglass Safety Guards, covering the cylinders and ink rollers at the delivery end. Either or both guards can be equipped with micro-switch controls which prevent running the press at speeds other than inch or crawl when the guards are lifted. For further details, please mention PEE No. 59 in your request.



FOLLOW THIS SERIES FOR THE REASONS BEHIND HAMILTON ECONOMIES

"YOU CAN'T COMPETE WITH A HAMILTON PRESS

EXCEPT WITH A HAMILTON PRESS!"



A—Unwinding. B—Wet Offset Lithograph Printing. C—Reversible Rubber Plate Printing (webbed for back-printing). D—Imprinting & Numbering. E—Punching (2 file holes & 1 line hole). F—Cross Perforating (2 units). G—Skip length perforating. H—Slitting. J—Folding. K—Rewinding.

HAMILTON PRESSES yield the industry's HIGHEST LONG-RANGE ECONOMY & PROFITS!

HAMILTON PRESSES:

You "bet on a sure thing"! Just as sure as your printing plant is Hamilton-equipped, you can out-earn less fortunate competitors! Here are the invariably proven facts—proved by this country's leading business form printing plants, over almost a quarter-century:—

1. **Provide the lowest over-all unit costs!**
2. **Operate at the highest top speed—well over 500 ft./min.**
3. **Assure practically uninterrupted production!**
4. **Require the lowest setup & make-ready time!**
5. **Afford the lowest upkeep time & expense!**
6. **Embody the greatest versatility & adaptability!**
7. **Provide the finest register control and accuracy!**

How much could Hamilton's unequalled performance improve your balance sheet? You may be missing a "good bet"! Find out now!

Members of Hamilton's customer-family buy "Leadership Insurance"—the same outstanding leadership consistently held by Hamilton's *advanced column* of research and development engineers.

"LEADERSHIP THROUGH PIONEER RESEARCH"

BUSINESS FORM MACHINERY PRECISION

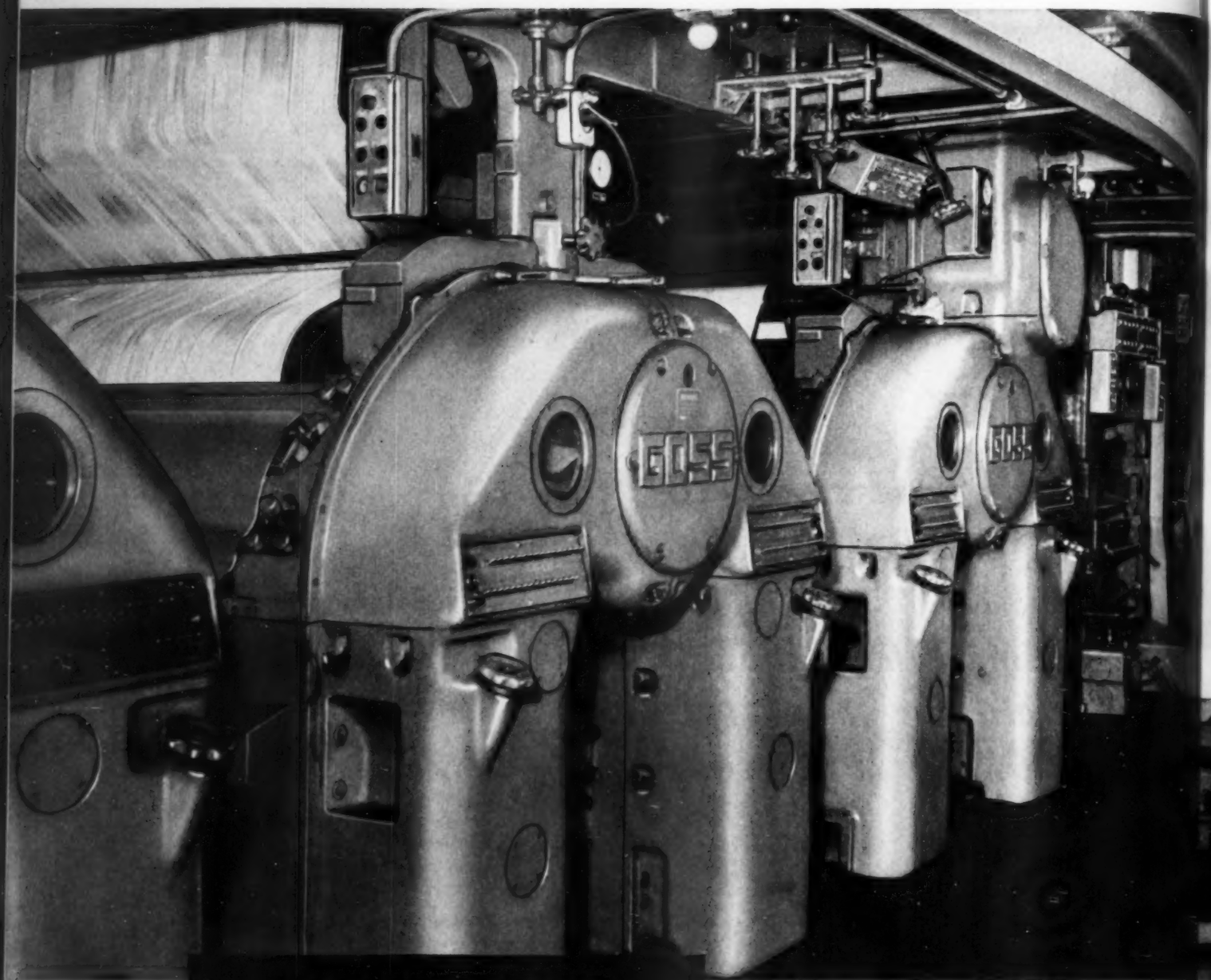
The **HAMILTON** TOOL COMPANY

910 HANOVER ST., HAMILTON, OHIO

3535

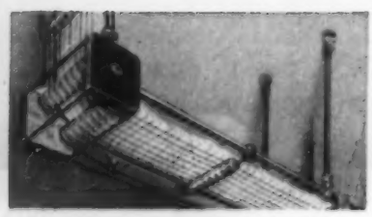
WANT ALL UNIT

Without trouble, de



CUTLER-HAMMER UNIT PRESS DRIVE INSTALLATION *in the Miami Herald*

MIAMI HERALD,
one of Knight Chain of newspapers has this recent installation. Consists of 12 Unit Goss Headliner Press equipped with C-H Unit Press Drives. Runs consistently 44 to 48 thousand newspapers per hour.



CUTLER-HAMMER NEWSPAPER CONVEYORS
Used in practically every conveyor-equipped plant in North America. Standard Duty Type handles up to 56 pages at any speed up to 60,000 I.P.H. Heavy Duty Type handles up to 96 pages at speeds to 60,000 I.P.H.

CUTLER-HAMMER WEB BREAK DETECTORS
Stop press instantly if web breaks. Web can be rethreaded without latching detectors. Easy to mount.

DRIVE ADVANTAGES

delay, excessive costs?

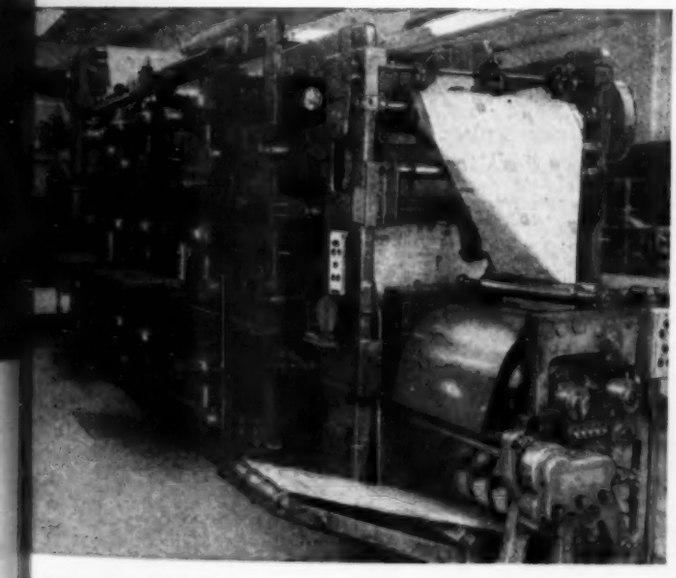
Then keep it simple...Keep it sturdy...KEEP IT CUTLER-HAMMER

There is no need for putting up with trouble in a unit drive press installation. For Cutler-Hammer has achieved the maximum advantages of this type of drive, and done it so simply, so sturdily and dependably that putting on an edition becomes a mere routine matter of course.

Cutler-Hammer has taken the simple, sturdy, *familiar* components—the sturdy Ac wound rotor unit motors, the simple, sturdy, familiar industrial type control components, and integrated them into a unit drive that stands alone and is thoroughly understood by your regular plant electrician. Each press unit has its own driving motor. Each driving motor has its own control . . . its own independent primary control, its own independent secondary control. This gives true unit-type construction and operation. No transferring of main motor circuits from one folder controller to another. Failure of one component won't immobilize the press; the entire press can still be run at top speed without risk of overload.

Each motor has its own braking system, its own braking contactor, its own auto-transformer, its own rectifier for Dc braking. Control is connected directly to commercial voltage supply lines. No transformers. No conversion apparatus. Motors are easily installed; no special alignment between rotors is required. No problem of "dividing" press load, or of circulating currents. No instantaneous peak torque output during acceleration/deceleration. The C-H cam drum accelerator has 83 speed points. Inching and threading *don't* draw current through the battery of motors. These and many more features of operation, safety, easy maintenance at top performance constitute reasons why you should investigate this simplest, sturdiest, most dependable, most advantageous of all press unit drives. Write or phone for further information. CUTLER-HAMMER, Inc., 1460 St. Paul Avenue, Milwaukee 1, Wisconsin.

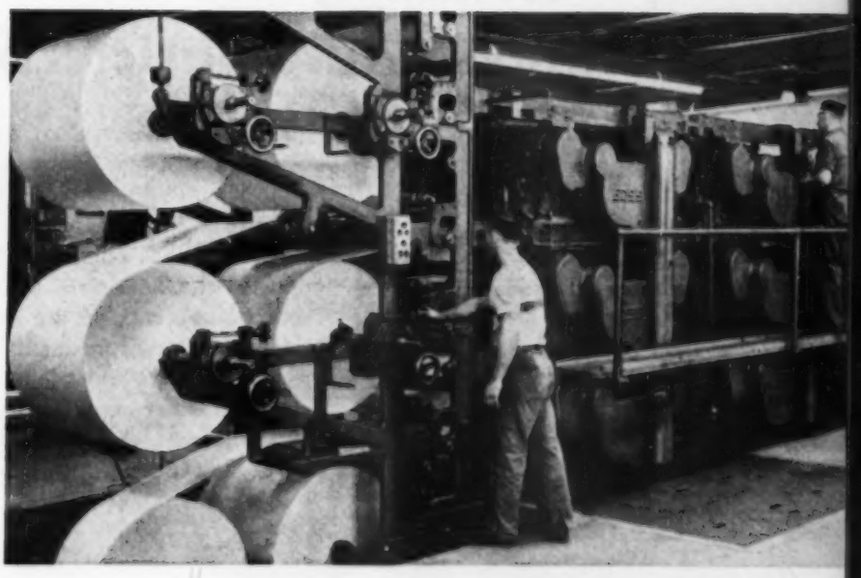
CUTLER-HAMMER
MOTOR CONTROL
C-H



utler-Hammer 2 Motor Drives serve many color plants as well as unicipal dailies such as

THE EVENING REPUBLICAN
COLUMBUS, INDIANA

obert N. Brown, Manager, says C-H Drive on Goss Dek-A-Tube ress has given peak performance at all loads from 2 to 24 pages.



Cutler-Hammer drive on Goss Dek-A-Tube Press.

MARSHFIELD NEWS HERALD
MARSHFIELD, WISCONSIN

Cut mailing-room costs with the dependable

Signode Automatic Wire Tying Machine

first choice of more than 350 newspapers world-wide

Signode Automatic Wire Tying Machines reduce labor costs, permit more efficient use of manpower, meet delivery deadlines, assure tight, windproof, bundles with added protection against pilferage.

Many newspapers around the world have been using Signode Automatic Wire Tying Machines continuously for more than 30 years! In fact, over 30 newspapers with circulations in the area of 50,000 use only one machine.

Such confidence in the dependability of Signode Automatic Wire Tying Machines comes from day-to-day experience . . . from the knowledge that during the past 30 years Signode has eliminated the causes for tie-ups, and has built a heavier, sturdier machine that alone can provide years of dependable service.

Whether your circulation is 50,000 or 5,000,000, you'll want more information about Signode Automatic Wire Tying Machines. Write

SIGNODE

Steel Strapping Company

2667 N. Western Ave., Chicago 47, Ill.

this seal means security in shipping

SIGNODE

Offices coast to coast.
In Canada: Canadian Steel Strapping Co., Ltd.
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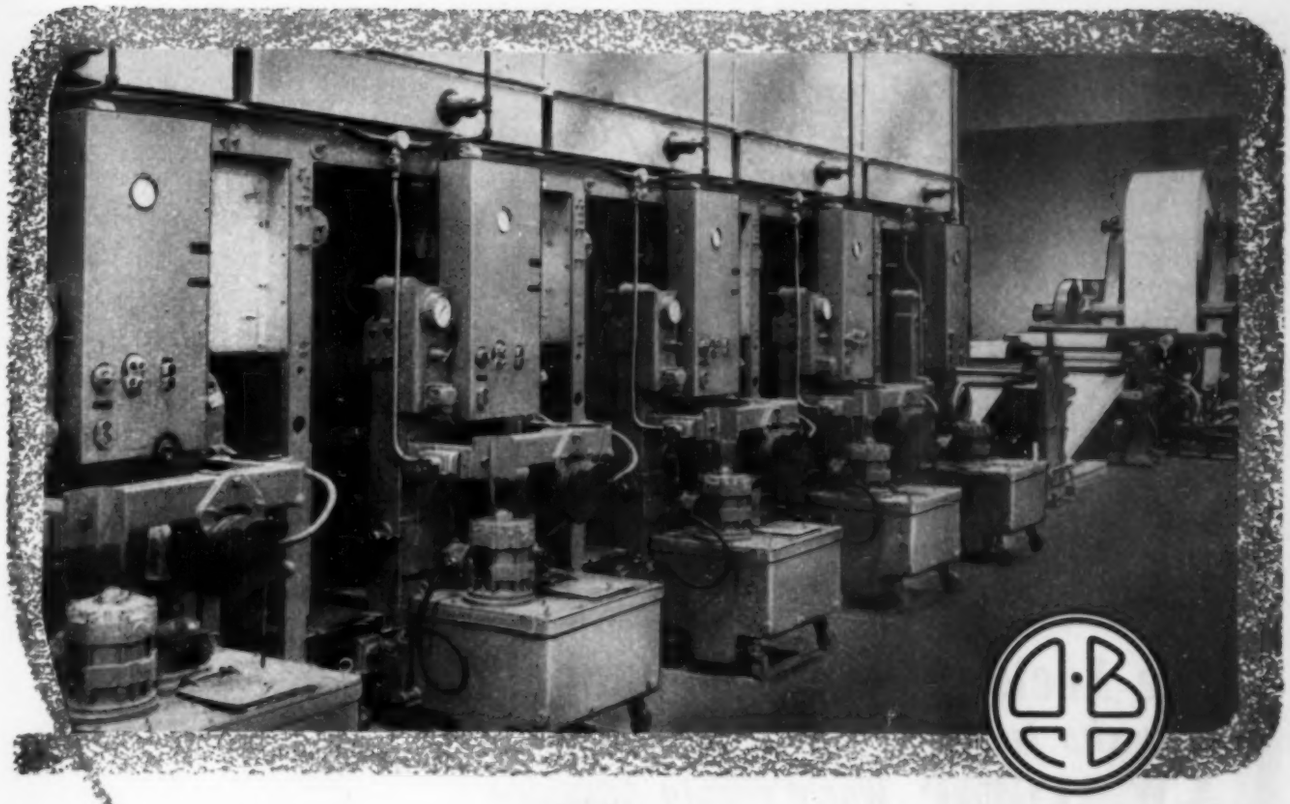


NEW Staude "1000"

BRINGS VERSATILITY TO OHIO BOXBOARD GRAVURE DEPARTMENT

The Ohio Boxboard Co. plant at Rittman, Ohio, has installed a Five Color Staude "1000" Rotogravure Press, a Staude Butt Splicer and an in-line Mercury Die Cutter-Creaser. This combination, equipped with a new web tension control system, is the closest approach to automation in the industry.

Ohio Boxboard knows well the quality, speed and cost advantages of gravure. This new Staude installation with its larger cylinders and design for quick change, adds the big operating advantage of versatility. Frank Kulow, Gravure Supervisor, says of the new Staude, "We are very enthusiastic about the potential of the gravure process and are looking forward to top product quality, uniformity and production."

- √ **Prints webs up to 45" wide with 23" to 46" circumference engraved cylinders—a production bonus of 20% to 25% on every impression.**
- √ **Continuous press operation achieved with Turn Over Roll Stand, Automatic Butt Splicer and Mercury Die Cutter-Creaser.**
- √ **Fast changeover of only 15 minutes per color—each color station is a complete rotogravure printing unit.**
- √ **New web tension system in electric drive assures accurate register.**

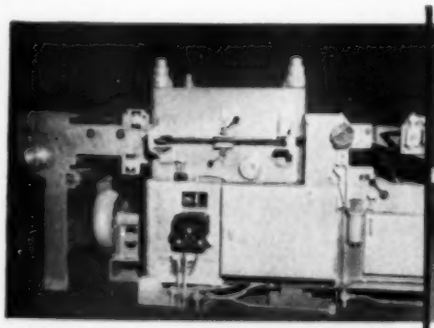
Write for Staude "1000" Bulletin

E. G. Staude MANUFACTURING CO., INC.

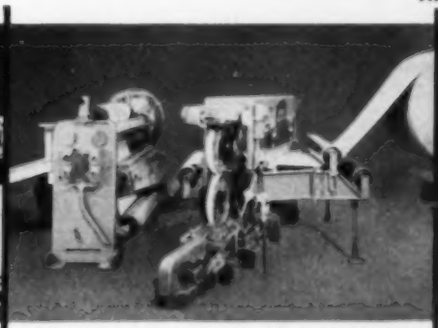
2675 UNIVERSITY AVENUE • ST. PAUL 14, MINNESOTA

***Eastern Office:* 35 Beechwood Ave., Mt. Vernon, N. Y.**

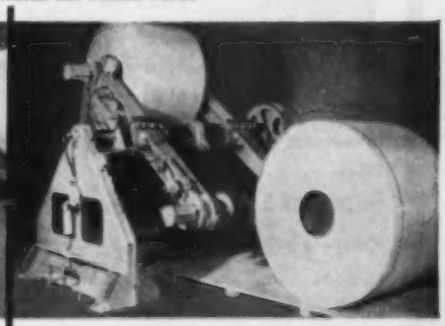
PHONE: Mt. Vernon 4-3753



In-line Mercury Die Cutter-Creaser's 200 strokes per minute allows continuous operation.



Butt Splicer automatically splices web of one roll to another without stopping the press.



Turn-Over Roll Stand brings all sizes of roll stock into position for uninterrupted splice

No injuries, no damage

The Accident did NOT happen *thanks to* A.W. ALGRIP *World's only Abrasive rolled-steel floor plate*

No skid!

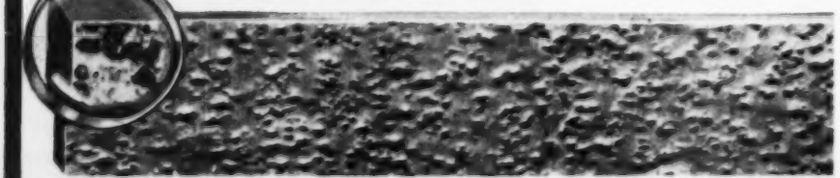
On ALGRIP—under the most hazardous slipping conditions—wheels *and* men's feet hold fast in the powerful friction grip of thousands of abrasive, friction particles.

ALGRIP—made by a patented process—is rolled steel into which a grinding-wheel type of abrasive has been pressure-rolled —*not coated*—to a uniform depth. Wear and tear merely exposes more abrasive particles. Overlaid or as a complete flooring requiring minimum maintenance, ALGRIP fabricates easily—soon pays for itself in slashed accident and insurance rates.

Make a test installation in your *worst* slipping area. Watch accident rates tumble and morale improve.

Call or send for detailed booklet today.

A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE



ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.
Please send A.W. ALGRIP Booklet AL-30

Name_____

Title_____

Company_____

Address_____

City_____ Zone_____ State_____

Other Products: A. W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

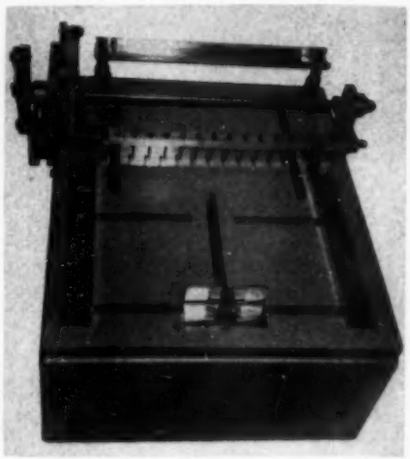
Equipment & Supplies

(Continued from Page 20)

keen cutting teeth provided by fine diamond grinding reduces pressure on the machine and uses less horsepower. The carbide tips provide a smooth, accurate cut for easy lockup on the press. For further details, please mention PEE No. 44 in your request.

Tipper and Collator

A desk model tipper and semi-automatic collator for the multiple copy form field has been announced



by Printing Specialties, Inc. The Pacemaker Jr. is 21 in. long, 17 in. wide and 9 in. from base to table top. Speeds up to 1850 sheets per hr. are possible with the Pacemaker Jr. The tipper and collator is equipped with a glue tipping mechanism, self jogger, and thumb release mechanism. The glue tray is removable for clean-

(*Continued on Page* 65)

SOLD BY

Western Newspaper Union

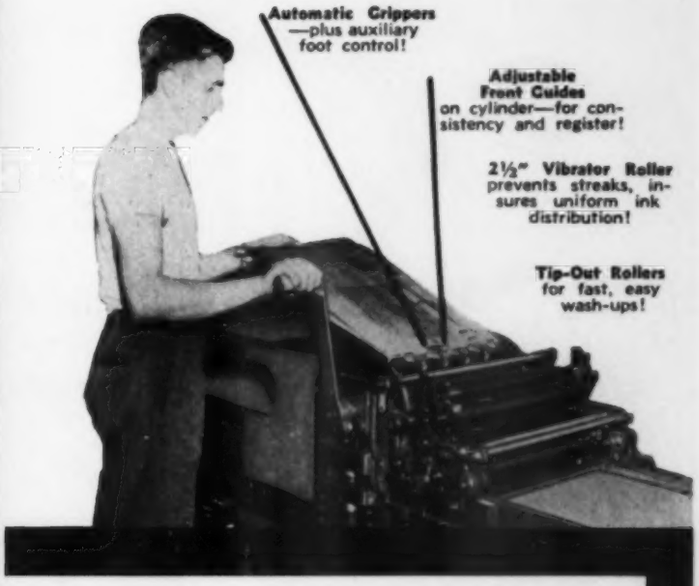
E. C. Palmer & Co.

Harry W. Brintnall Co.

Introducing

the new Challenge

SERIES "GP" PROOF PRESS



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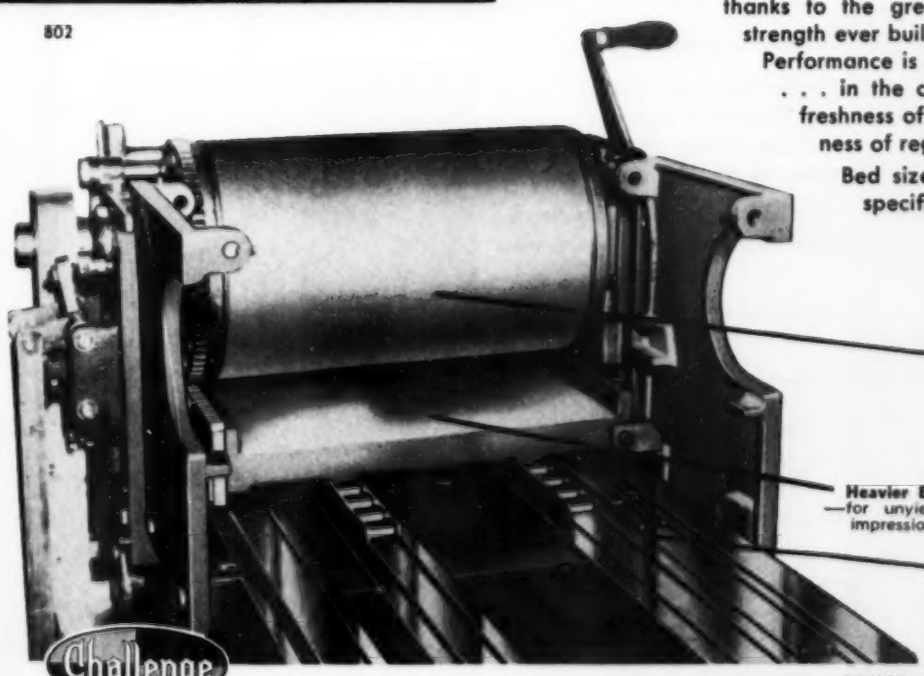
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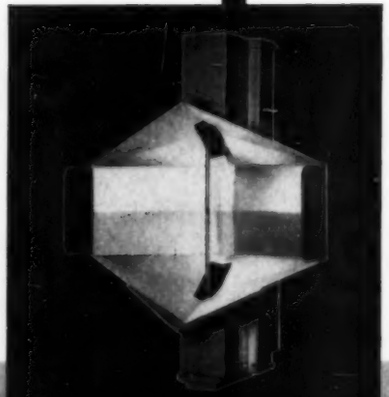

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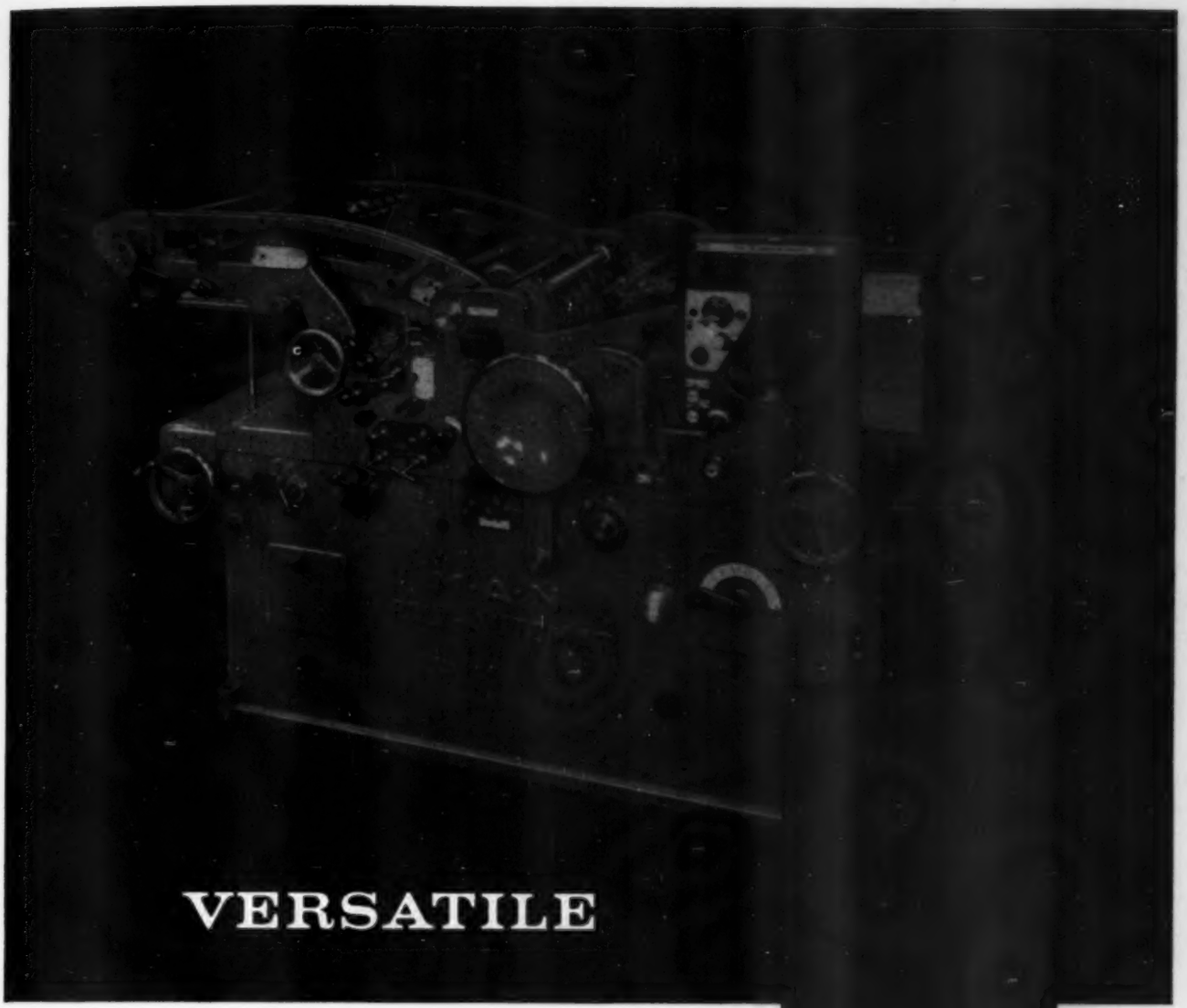

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The gleaming eyes of today's scientist are looking into tomorrow's means for improving communications via printing.

Fascinating Look into Future Communications By Printing Field

By ROSWELL K. FISHER*

**Managing Director,* Time-Life's *Springdale Laboratories, Springdale, Conn. Abstract of address delivered before Cleveland Advertising Club, January* 1956.

Never in the history of the Graphic Arts, or as we call it, the "science of communication via printing," has there been such spending and effort on self-improvement and, along with new development, in the thinking and approach to the problems of physical production. Big change is in the making. In a few short years, we will see the engineer and the scientist fully established in the Graphic Arts and what remains that is artistry converted to science. Some of the early manifestations of changes are already well underway.

In connection with the production of the type pages in certain magazines and newspapers, typesetting machines are now being operated automatically from punched tape and in some cases, such as *TIME, the Weekly News Magazine,* tape is created at a remote point.

Whether such machines are operated manually or automatically, their basic mechanics place a limit on their operating speed. But now we have the new development of photographic typesetting — Intertype's Fotosetter, the Photon, Mergenthaler Linofilm, and others. There is no practical limit to the speed at which type can be set photographically—speeds of 2000 words (not characters) a minute are entirely feasible. In general, the quality of type set photographically is superior to cast type.

Global Type Transmission

The electrical communication network that will provide this service will be ideal for the global transmission of type composition, and coupled with improved "wirephoto" illustrations, the system will provide the science of printed communication with a world-wide, almost instantaneous copy transmission facility.

Evolution of Engraving

But this is only the start. Turning to the field of engraving, there are some new machines that promise perhaps not a revolution, but important evolution in this process. There is, for example, the Fairchild Scan-A-Graver that is doing such a fine job (at the moment) for the small circulation newspaper—but which has a much greater potential and its new brother, the Scan-A-Sizer. With these machines and others like it, a photograph can be translated in a matter of minutes into an engraving capable of being attached quickly to a printing cylinder and run with excellent quality for thousands of impressions.

Color Scanners

Then there are the so-called color scanners. Basically, these machines are electronic computers which calculate at the speed of light *what* color and *how much* of *what* color must be laid down on paper to produce a pleasing and faithful reproduction of a color photograph, carbro print or original art work. These new machines do not do a perfect job and need the help and skill of the expert color engraver. They greatly speed up the color engraving process plus bringing more realism and third dimension to the printed reproduction. With the assistance

For Boys of All Ages—In a move to help support the Education Council of the Graphic Arts Industry, Inc., the national association that aids and coordinates printing industry educational efforts, Harris-Seybold Co. will for the first time grant commercial reproduction rights to its series of original calendar paintings, depicting well-known books. George S. Dively, chairman and president of Harris-Seybold, says, "Each year we hear from hundreds of people who want a print of the new calendar picture. These offers to pay for use of the calendar art work gave us an idea for helping the Education Council. Why not earn funds for the Council by opening up reproduction rights to the paintings?" The Education Council of the Graphic Arts is a group in the printing industry which brings all its resources to bear on the tremendous job of obtaining, training and improving its manpower. There are about 40,000 Graphic Arts companies in the U. S., faced with maintaining a work force of about 800,000 people, most of them highly-paid skilled technicians. The Education Council has helped on such projects as teacher training, a nationwide survey of school and college printing courses, the printing industry's first safety manual, and recruitment literature; and is currently working on a greatly broadened program. Under the arrangement worked out by Harris-Seybold, any company, advertising agency, printer, lithographer or publisher can obtain permission to use one of the previous or future paintings, by paying $500 to the Education Council for art work originally costing more than $2,000. Reproduction rights will be granted exclusively for any single purpose for one year. Firms interested in using the illustrations are invited to obtain further details from the Education Council, 719 Fifteenth Street, N.W., Washington 5, D. C., or from Harris-Seybold Company, 4510 East 71st Street, Cleveland 5, Ohio.

of such machines, it will soon be possible to produce top quality, full-color engravings in a matter of a few hours or in magazine publishing language—on a current schedule. The product of these new machines can be used and help the production of color illustrations produced by the lithographic and gravure processes. Improvements will be built into future machines and it will do its job even faster and better.

Future Printing Element

It is almost a certainty that the printing element of the future will be some kind of plastic material, obsolescing the present metals used in printing plates. Such plates will take many forms but all of them are likely to have one basic similarity—the plastic printing surface will be light sensitive, similar to photographic film. Printing plates of this type are now being made and used experimentally and their development is in the hands of some of the top research minds in the country. The first additions of these new printing plates are being developed for letterpress printing but the basic principles may be used to produce improved lithographic plates and gravure cylinders.

Using prefabricated base plates of this type, printing plates will be produced from photographically set type in a matter of a few minutes by a process so simple and foolproof that even you and I could operate the equipment although it may take an alert graduate engineer to service it and keep it running.

What we have been saying is that the science of communication via printing is getting a major face lifting in that important area where the efforts of the editor, copywriter, artist and photographer first meet the process of conversion into a printed page or any kind of a print on paper. The hundreds of operations that now attend this conversion process are being streamlined with new tools and new methods (some of them radically new) to effect a major simplification and thereby do things faster and better.

We would have had faster, more precise printing presses without the development of the new methods of typesetting, engraving and platemaking. But it is the combination of this new development with new press engineering that fills out the big picture.

A modern newspaper press operating at high speed—say 1500 web ft. per min.—appears to be really rolling by present standards. But in prototype, and under construction, are magazine presses designed to exceed the fastest newspaper printing speeds by several hundred feet a minute. And the goal and expectation is that one, two, three and four color printing will be done at these speeds at a level of efficiency and quality not approached before. In the engineering of these new presses things have been learned that present strong argument that the knowledge is now in hand to engineer printing equipment that will operate at almost any speed having practical usefulness.

The heavy hand of the scientist is seen again in the design of the new presses. They have gadgets never seen before on printing equipment. Construction is being held to toolmaker tolerances. At full speed these new presses purr like a fine engine. In laymen's language what does this hold out to the user of printed communication? Again it means speed up. But along with faster schedules it means notably improved reproduction quality, type and picture illustration of greater beauty and appeal and greater uniformity.

Must Deliver—or Else!

The press of the future will call for capital investment perhaps twice or several times that of the past. It must deliver the speed and production efficiencies that its engineering and construction has cost—or else. There is little room for doubt, however, that its performance will meet and exceed present expectations—and for good reasons. Never in the history of printing press development have printing problems been under such intensive observation and study by scientists and engineers. And never before this have such people

(*Continued on Page* 45)

Builds-in 2600 Books Per Hr.

A building-in machine (Fig. 3) recently designed for the Dexter Folder Co., by The de Florez Co., Inc., is in operation in several printing houses and has produced up to 2600 books per hr. Average production, however, is limited to approx. 2200 per hr. by the lower capacity of the casing-in machines in the line.

In addition to high production rates, dollar savings, for example, are conservatively estimated at $7500 per year per machine as a result of the increased production per work hour. Investment in boards and presses as used in building-in operations no longer is required and books may be handled within 1 hr. after leaving the machine, thus eliminating the 4 to 12-hour adhesive drying period required, further speeding output, and releasing valuable floor space for other uses. The machine comprises simple mechanical elements and requires virtually no skill to operate. It can be set up and put into operation within 8 hrs. after being received. The standard machine handles books ranging in size from ¼ in. to 2 13/16 in. thick and 3½ in. to 9 in. wide with no limitation on height. Modified machines are available for other size books. Books built-in by the new machine have a fine appearance; there are less rejects than by the hand method, and costly in-process handling of individual volumes is virtually eliminated.

How the Machine Works

An operator stationed at the feed end of the machine receives books from the preceding casing-in machine, squares them, positions them with the back up and pushes them forward between guides until gripped between two opposing endless belts which convey them through the machine, compressing them under constant pressure for the full length of the machine (Fig. 1). The book hinges travel between electrically heated nippers which form and

(*Continued on Page* 62)

Detail Views of Dexter Building-in Machine

1. Book entering Building-in machine. Opposing endless belts move books through the machine, the hinges traveling between electrically heated nippers which iron them and dry the adhesive applied at the preceding casing-in machine. Handwheel (right) adjusts left side of machine, through chain and worm-gear linkages, to accommodate books of different thicknesses.

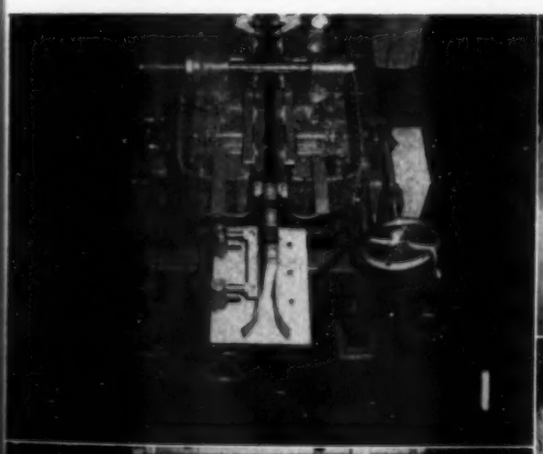
2. Conveyor-belt elements comprise needle-bearing roller chains with special lugs to which are bolted rubber faced steel strips, the back of every third strip having a support roller which rides the flange of an angle bolted to the cast-iron beam around which the belt travels.

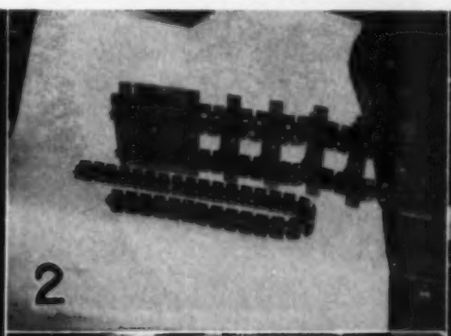
3. Overall view of machine showing chains which operate through worm gears to adjust one side of the machine for books of various thicknesses. Shown also is the handwheel (right) and machine-long shaft which raises and lowers feed and delivery end-tables simultaneously to accommodate books of various widths.

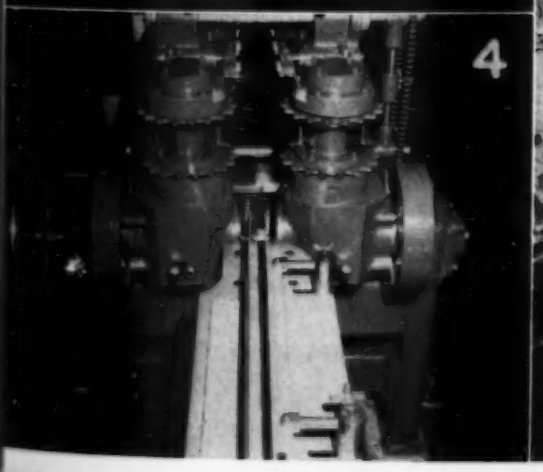
4. Drive end of machine. Chain drive from gear reducer (center) drives counter shaft having pinion at each end. Pinions drive spur gears (enclosed in guards) which in turn drive miter gears (enclosed in gear boxes) which drive the vertical shafts on which are mounted horizontal belt sprockets.

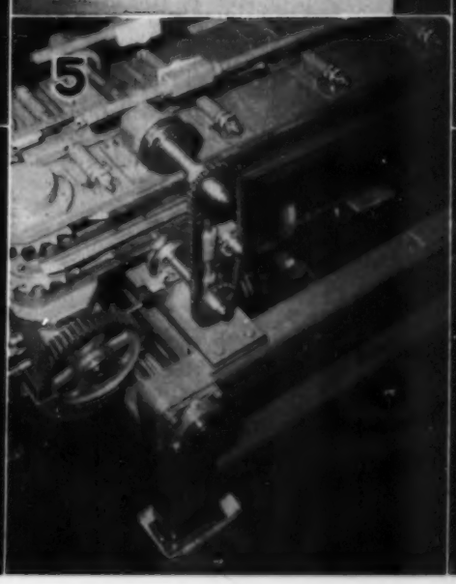
5. Close up showing pinion of counter shaft and exposed spur gear. Pinion is extra long to engage spur throughout the entire range of machine adjustment. Also shown is close up portion of chain and worm gear linkage which adjusts one side of the machine. Visible too are the steel strips against which the chain rides, the machined angle flange on which ride the belt support rollers, and nipper spring-tension devices.

6. Wrench adjustment for taking up belt slack. Wrench-actuated cam pivots terminal block outward, tightening the belt.









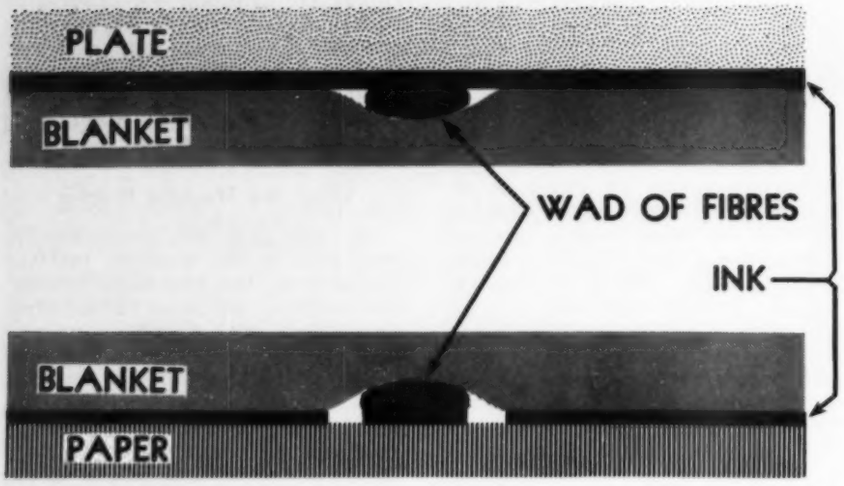


Fig. 1—Greatly enlarged diagram showing how a solid particle like a wad of paper fibers, piece of ink skin, or dirt on the blanket produces a hicky on the printed sheet.

Hickies and Spots— What To Do with 'em

By ROBERT F. REED*

**Consultant, Lithographic Technical Foundation.*

Nothing is more destructive of quality in a lithographic job than hickies and spots in the printed work. These are most visible in solid areas, although there are often just as many in equal areas of halftones. Their occurrence is all too frequent and the headache they produce is not cured by Aspirin.

Hickies Defined

To the pressman, hickies are small spots of more or less solid ink surrounded by white rings. He often calls them less refined names. Under magnification, they look somewhat like doughnuts in reverse, although they are not always round. Once they appear, they repeat on sheet after sheet in the same places and increase in number as the run progresses. They are caused by solid, more or less ink-receptive particles that are stuck to the blanket or plate, and which are not transferred to the paper or dislodged by the form rollers. It takes a washup to get rid of them but, unless their source is removed, they start coming back as soon as the run is resumed. In Fig. 1 is given a rough idea as to why hickies print the way they do.

Spots Defined

White or light spots in the work, like hickies, can be caused by particles or fibers stuck to the blanket or plate. The only difference is that, instead of being ink-receptive, these particles are water-receptive. In fact, some particles start out printing as hickies, but as they become saturated with water the solid center spot tends to fade out and disappear.

It is interesting to select a particular spot or hicky and thumb

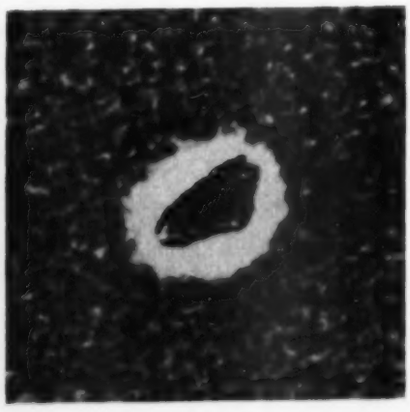


Fig. 2—Greatly enlarged photo of a typical hicky caused by a particle of ink skin.

down through the pile of printed sheets till you find the sheet on which it first appeared. Doing this, and examining the spot under a glass or microscope, will generally give a clue as to source of the hickies or spots, or both, that are ruining the quality of the job.

The main sources of particles that cause hickies and spots are ink and paper. But a dirty press, a dirty ceiling, or bad rollers can also supply particles of foreign matter.

Ink Particles

LTF has found that most hickies are caused by ink skin (dried ink). Great care should therefore be taken to prevent the skinning of ink, either before or after it is put on the press. Sources of ink skin can be as follows:

(1.) *Ink Manufacture.* Ink ingredients such as vehicles, base inks and driers can dry and form surface skin. On the rare occasion when any such skin should get into the final ink, grinding would only break up the larger pieces and scatter particles of skin through the entire batch of ink. Such particles would cause hickies.

(2.) *Handling of Ink.* When ink is mixed for the press, great care should be taken to prevent any skin from getting into it. In fresh kits or cans, the ink is usually covered with a disk of oiled kraft paper. When this is peeled off, the surface of the ink is left clean and free from skin. However, there may be some skin around the edges and this should not be disturbed while removing the ink. In case only part of the ink is removed, the remainder should be smoothed and leveled with a broad knife. Replace the oiled paper disk carefully, making sure that it contacts the entire surface and leaves no air pockets to form skin. If this is not done, a great deal of ink will be wasted in removing the skin when the remainder is needed later on.

(3.) *Improper Press Washups.* In washing up the press it is important to remove all the ink from the fountain and clean it thoroughly. Even though the main body of ink is stirred or agitated during the run, it tends to dry around the edges and on the under side of the blade. Any such accumulation of skin or dried ink eventually gets mixed with the ink and produces hickies. Another source of trouble is the accumulation of dried ink at the ends of

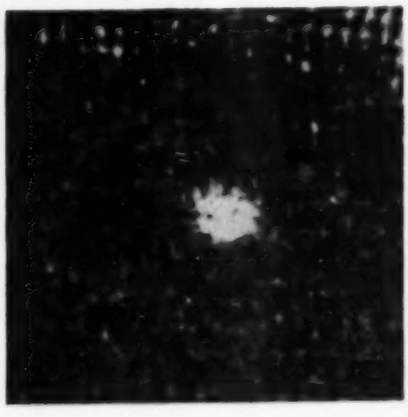


Fig. 3.—Greatly enlarged photo of a typical hicky caused by a loose particle of paper several sheets after it first appeared.

rollers. Such ink is not removed by machine washups. It dries days or weeks later. Eventually it becomes dislodged, gets into the ink, and causes hickies.

Hickies caused by dried ink or skin can usually be recognized by their shape and appearance. In Fig. 2 one is shown, in very much enlarged form. Notice that the spot inside the white ring has an irregular shape and sharp edges. The edges are also slightly denser than the center.

If you select a particular hicky of this type and thumb down through the pile until you find the first sheet on which it appeared, you will notice that there has been practically no change in its appearance.

If you locate the particle on the blanket or plate, you can pick it off and examine it under a microscope. By feeling it with a needle you will find it soft and pliable, with no fibers present.

These things are characteristic of ink skin or dried particles. And once the particles are identified, the only thing to do is wash up the press, discard the ink, and mix a fresh, skin-free batch of ink.

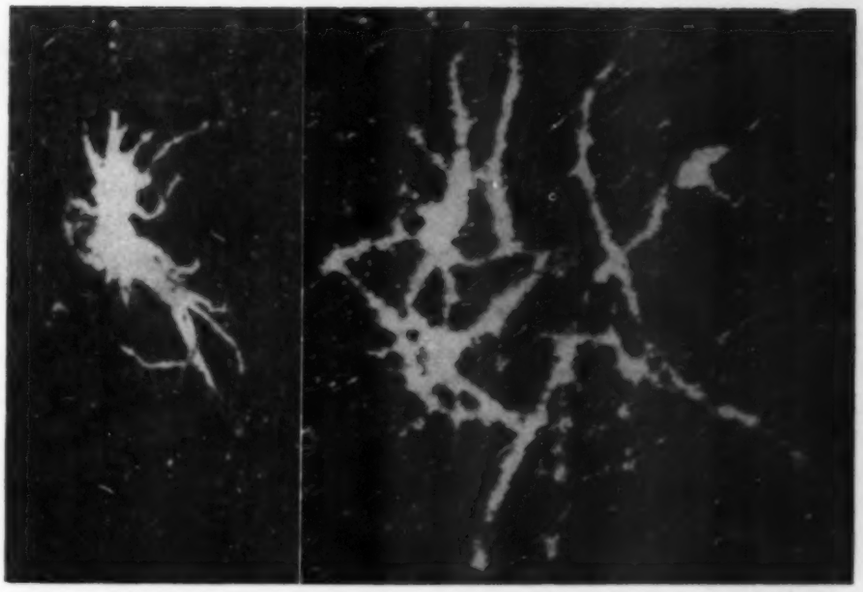


FIG. 4A. FIG. 4B.

Fig. 4.—Greatly enlarged photos. At 4a (left) is shown a picked spot on a coated sheet. The coating and some fibers stuck to the blanket leaving a crater in the paper. At 4b (right) is shown a typical spot in a printed solid on sheets following the one that was picked.

Paper Particles

Despite all the precautions taken by the mills, paper is second to ink as a source of hickies. It can produce both hickies and several kinds of spots. More knowledge and experience are necessary to identify the defects in paper that cause them. These defects are as follows:

(1.) *Paper Dust.* When paper is slit and cut to sheet size in the mill, a certain amount of dust is formed. Some of this dust is likely to get between the sheets and remain there. In most mills, some attempt is made to get rid of this dust by means of compressed air or vacuum, but they are not always completely successful. And if only one or two particles remain on each sheet, printing a thousand sheets can produce a lot of hickies and spots.

(2.) *Picking of the Paper Surface.* Small areas of surface fibers or coatings are sometimes picked, generally in the solid areas. These stick to the blanket or plate and produce hickies or spots that repeat sheet after sheet.

(3.) *Lint, Fuzz, or Whiskers.* Slitting and sheeting of paper sometimes set free individual fibers that get trapped between the sheets. Lint, however, is usually due to fibers being loosely bonded in the paper surface. It is usually worse on the wire side than on the felt side. These fibers are pulled out of the sheet by the ink, but they quickly become saturated with water, refuse to take fresh ink, and leave white images of themselves in the printed work. They are, of course, most apparent in solids.

(4.) *Holes in the Paper Surface.* These are holes resulting from air bubbles in the fiber finish when the paper is made or bubbles in the coating slip when the paper is coated. They are deep enough to prevent the blanket from depositing ink in them. Spots due to such holes occur on only one sheet and do not repeat. In other words, the distribution of spots on each sheet will be different.

Spots caused by slitter and cutter dust can be any shape from that of individual fibers to that of slivers. If you thumb down through the printed sheets to where a spot first appeared, the original spot will be white and show no evidence of picking. On succeeding sheets, the spot will be a hicky, but the center spot will be gray or a tint, not a solid. It will tend to get lighter on succeeding sheets. This, and the absence of a sharp edge around the center spot will distinguish paper dust

". . . wife couldn't get a baby sitter today . . ."

from ink skin. In Fig. 3 is shown how a hicky of this type looks several sheets after its first appearance.

Spots due to picking of the paper surface or coating can be any shape. If you locate the sheet where the spot first appeared and examine it under a glass, you will see that the surface was picked. Hickies will appear on succeeding sheets, but their center spot will lack the sharp edge of an ink-skin hicky, and may print lighter on succeeding sheets as the fibers become water-soaked. A spot in a solid on the surface of the sheet that is picked is shown in Fig. 4a. How such a spot may appear on sheets that follow the picked sheet and after a number of them have been printed is shown in Fig. 4b.

Particles From Other Sources

Hickies can also be produced by particles of dust or dirt falling from a dirty ceiling, or dislodged from a dirty press or disintegrating rollers. Ceilings should therefore be cleaned and painted at regular intervals. Press members should be cleaned at least once a week. They must be kept free from oil or grease that can accumulate dust and non-offset spray or powder.

Fiber-shaped spots can be caused by shedding dampener covers. These have the same appearance as spots caused by lint or fuzz, but are generally much longer, since the dampener fibers are cotton. Newly covered dampeners can cause them if they were not thoroughly washed before they were installed on the press. Old dampener covers may become rotten and shed fibers.

Summary:

LFT's studies have shown that hickies and spots in printed work can be caused by ink skin or particles of dried ink, by slitter or cutter dust on paper, by particles of fiber or coating picked from the paper surface, by lint and fuzz, by dust or dirt from the ceiling or from accumulations on press members, or by shedding dampener rollers. Each type or hicky or spot can be traced to its source by a little detective work. But prevention is all important. This involves care in the manufacture and handling of ink, careful press washups, and good housekeeping around the press. If paper contains dust, tends to pick in small spots, or is linty, there is not much the pressman can do about it except to wash up the press frequently and take his troubles to his paper supplier.

Ask *Printing Equipment Engineer* for the source of equipment and supplies.

Matrices—

Handle Them Carefully and Prevent Hairlines Between Letters

By SOL M. CANTOR*

**President, The Composing Room, New York, N. Y.*

The Circulating Matrix of the linecasting machine is one of the many wonders of our mechanical age. Because millions are being made and used all over the world, these matrices have become a common sight and no one pays much attention to them. But it requires nearly 58 separate mechanical operations—some held to 0.0001 in. to prepare them for the machine.

This does not include the work of designers, draftsmen and punch cutters. Though the circulating matrix is the lifeblood of the linecasting machine, it is the least understood and gets a minimum of maintenance. I suppose it is because matrices were not too costly in the past and were easily obtained. Constantly rising costs, however, have changed this picture and many jobs suffer typographically because the high cost of matrix replacement, and the wait for matrix orders to be filled, deters management from making new purchases.

In today's operation of our machines, the matrix equipment must be in top condition, because the demand for quality proofs—both black and white and transparencies—for offset and gravure must be perfect to be acceptable.

We can no longer say this is good enough because the customer couldn't get anything much better elsewhere. We are faced with competition from photocomposition. The main selling point is the sharpness of the type image produced. We, therefore, must strive to give our customers proofs beyond criticism. It becomes apparent that the matrix from which our type is cast must be made right at the factory and kept right in our plants.

The factories endeavor to hold depth-of-drive tolerances to within 0.0005 in. Alignment is likewise held very close. When new matrices are received, they should be cast and a light impression taken from the slugs. This will show up any defects in depth of drive or alignment that may have gotten by the factory inspectors in a few instances. Defective matrices will be replaced by the manufacturers.

When we stop to think about linecasting matrices costing 25c

Graphic Arts Industry, Inc. Elects—At the recent 1955 board of directors meeting of the Graphic Arts Industry, Inc. in Minneapolis, Minn., the following officers were elected: President, Clinton E. Johnston, Daily News Pub. Co., Beloit, Wis.; First Vice Pres., Milton B. Kihlstrum; Second Vice Pres., Karl H. Wagner; Third Vice Pres., Clifford H. Russell, Free Press Co., Mankato, Minn.; Fourth Vice Pres., David R. Steven; Fifth Vice Pres., Wm. O. Lund, sr., Lund Press, Inc., Minneapolis, Minn.; Sixth Vice Pres., Frederick C. Schilplin; Vice Pres. and General Mgr., Paul J. Ocken, Minneapolis, Minn.; Secy.-Treas., E. H. Olson, Japs-Olson Co., Minneapolis, Minn. It was also decided at the meeting by the board of directors that the executive committee should meet at least four times a year in various cities served by Graphic Arts Industry. The Industry office is a non-profit organization with headquarters at Minneapolis. It offers a management-consultant service to the printing and publishing industry in the middle west and has been active since 1877. Paul Ocken is now serving the organization for his 16th year. Pictured here are Paul J. Ocken, standing; E. H. Olson and Clinton E. Johnston.

and up and the amount of money invested in the thousands of matrices in the magazines and on pi boards, we are bound to agree that this large investment deserves careful maintenance.

Hairlines and misalignment are two of the evils that begin to show up as matrices wear and I don't have to tell you how much trouble and expense they cause.

Elimination of Hairlines

The hairline, that insidious little fin appearing between characters, is the bane of the linecasting machine. It is not tolerated by the buyer of typesetting who is getting more quality conscious all the time. To hold this trouble to a minimum, a good procedure to follow is:

(1.) Clean spacebands thoroughly each shift.
(2.) Avoid loose lines.
(3.) Keep assemblers, assembler belts, distributors boxes, screws and channel entrances free from excess oil.
(4.) Never use liquid washes of any kind on matrices.
(5.) Use a device like the Clean-A-Mat.

The Clean-A-Mat

A laminated non-warp board is used for the base of Clean-A-Mat*. Two sheets of Durite are fastened with clamps to the board base. The matrices are run out of the magazine and each side is rubbed lightly on one sheet to remove caked-on graphite and dirt, and is polished on the other sheet. This treatment will not score or roughen the sides of the matrices as even a fine file would. Nor will it remove or injure the false wall that builds up on matrices during long use. Bent matrix lugs are easily detected, and should be straightened with duckbill pliers. The use of any kind of hammer is not recommended.

After cleaning the sides as described above, stack the matrices on a long galley and clean the toes with an electrotype rubber. The galley is then covered with another to turn all the matrices at the same time, and toes on the other side are cleaned. A blower is used to remove grit by turning matrices from galley to galley several times.

After this operation you will find that most hairlines have been eliminated. Only matrices with *broken* side-walls will still show hairlines. These will have to be replaced.

It is good practice to clean fonts that are in constant use at least once every six months. Sorts should always be on hand so that the channels can be kept full. An operator cannot set type unless he has enough matrices to work with. It is much cheaper to buy replacement matrices ahead of time (it takes some time to have orders filled) than to suffer poor production due to shortage. Sort out all matrices that are picked up from the floor around the machines; clean them, examine for damage and run them into their respective magazines. In many shops these matrices are placed on a tray to be put back into the magazines at a later date. But this doesn't keep channels full—and somehow that job never gets done. *So do it now.*

Alignment Troubles

The main aligning lug (lower casting side) will wear faster than the other two (upper ear index side and bottom of lower lug index side). When main aligning lug is 0.002 in. or 0.003 in. under size, you'll begin to note misalignment. Customers will mark "Please align."

Resetting will do no good as long as the matrices are not corrected. This trouble will become especially pronounced when sorting up fonts. The new matrices will *not* align with the old and the whole font will become troublesome.

The Align-A-Mat

The Align-A-Mat* is a simple and positive die that will restore the lugs of old matrices to factory standard. New matrices will align with the corrected ones perfectly. It will also eliminate distributor stops due to worn lugs, thus saving time and money.

The machinist, his helper or an apprentice, can learn to use this device quickly.

Where Does Matrix Get Damaged?

(1.) Assembler
(2.) Intermediate channel
(3.) Transfer
(4.) Distributor box and distributor
(5.) Auxiliary boxes

The auxiliary distributor box on some Linotype mixers are each supplied with two small kidney-shaped rails. These little rails can ruin and have ruined thousands of matrices by undercutting the upper ears of thin matrices such as l.c. "i," "l," commas, periods, hyphens, etc. This happens when the points of these rails become short through wear so that thin matrices drop down between the pusher and the rail. The pusher will then, on each return stroke, gouge out a piece of the uppper ear of the matrix. I have seen some matrices gouged out as much as 3 and 4 pts. The auxiliary boxes should be watched and rails kept the proper length to avoid this costly damage.

*Clean-A-Mat, Align-A-Mat and Align-A-Drill may be obtained from Fisk, 130 West 46th St., New oYrk 36, N. Y.

The Align-A-Drill

Good matrices alone will not cast a good sharp face and produce a solid slug. To do that, you need good metal, a properly fitted plunger, good heat control and a clean, dross-free throat in the crucible.

The mouthpiece should be removed at least once a year and the throat of the crucible cleaned thoroughly to keep it free from oxide and dross.

Removing a Linotype mouthpiece is a job most machinists hate. There is always the danger of having one or more of the 13 screws holding the mouthpiece to the crucible break off while removing it. To drill out and retap broken screws is a difficult job even for a competent machinist.

The Align-A-Drill* makes the drilling out of broken mouthpiece screws a simple and positive operation. With this device, there is no excuse for tolerating fouled up crucible throats. Better slugs and botter faces can be had at all times.

Color on Index Side of Matrix

Use of contrasting colors on matrices is very desirable. It helps operators set cleaner proofs. It is especially helpful when making corrections.

Spaceband cleaning machines, where warranted, are also worth having. Clean spacebands are a *must* in all shops. There are other good items made by reputable firms that should be used in the machine room. Management should be constantly on the alert for these time and money-saving devices.

Time Element

Routine maintenance *must* be followed regularly if the machine is to do good work.

While my topic is concerned primarily with matrices, it applies equally to machines, proof presses, saw-trimmers, and all other equipment in the plant. It is poor economy not to have the necessary personnel to do this work. You will pay for it indirectly in decreased production and poor workmanship.

If your machinist has too much to do to enable him to do a proper job of maintenance, get an assistant. You will be the gainer in the end.

To Recapitulate:

Maintenance of your equipment in good working order is of utmost importance.

Have the necessary personnel to do it.

Keep an eye out for the many useful aids being manufactured and advertised by reputable concerns and use them.

Fast Etching

Of Special Zinc and Magnesium Can Now Be Done in the Same Machine

President Fred A. Dirkes, Atlantic Zinc Works and Rolled Plate Metal Co., announced company participation in development of a modified etching process and a new superfine grain special zinc engravers' metal, which is used in connection with the Dow powderless rapid etching process and equipment. The announcement was made during an address delivered by him before the Southeastern Photoengravers' Convention, Hotel Dinkler-Tutweiler, Birmingham, Ala., on Monday, January 16.

The speaker explained that his company and other engravers' zinc manufacturers, including Edes Manufacturing Co. and Imperial Type Metal Co., have proceeded on intensive research programs, each working independently to accomplish the desired results.

Dirkes stated he was pleased to announce his organization has developed a superfine grain special zinc engravers' metal for use with the modified Dow powderless rapid etching process. This is being offered under the registered trade mark name of Micro-Metal.

"Photoengravers and Graphic Art supply dealers," he said, "advised us that more photoengravers and newspapers would be anxious to install Dow Fast Etch Machines if they could rapid powderless etch both magnesium and zinc in the same machine."

Dirkes also explained: "Any engraving plant with a Chemco-Dow or Master-Dow machine can rapid powderless etch this Micro-Metal with only a slight modification to the present techniques for powderless etching of magnesium.

"Fine screen halftones, such as 133 line, can be etched to 0.002 in. to 0.003 in. within 30 sec. to 45 sec. Depths of 0.006 in to 0.008 in. can be obtained in 2 min. to 3 min. on the coarser 55 line to 65 line halftones on Micro-Metal. Within 10 min. to 14 min., line work can be etched in one bite to 0.025 in. depth. In addition to the advantage of speed, the quality of the plates is outstanding.

"Micro-Metal is also suitable for the conventional etching process. Micro-Metal is sold on a price-per-sheet basis at a cost of approx. 10% more than regular engravers' zinc in eight of the most popular standard sizes."

The speaker continued: "The quality you will get from the Dow machines on either magnesium or zinc will depend just as much on the good craftsmanship of the operator as it always has with conventional etching methods. This is not a pushbutton, automatic engraving machine. A careless operator can spoil more work faster with this machine than he can with a conventional machine because it will etch so much faster.

"I know you will agree that both the photoengraving and letterpress industries must never fail to be grateful to Dow Chemical Co. for far-sighted, costly and successful research for producing the Dow Fast Etch process. Now that both magnesium and zinc can be etched rapidly by powderless etching, I am confident it will result in considerable increase in sales and production of more photoengraved printing plates on both metals."

Tri-City Planning Committee

The Tri-City Conference on Graphic Arts Personnel, covering recruitment, testing, selection and training, will be held March 24, 1956 at the Patterson Cooperative High School in Dayton, Ohio. The meeting is jointly sponsored by the Printing House Craftsmen Clubs of Cincinnati, Columbus, and Dayton; Printing Arts Assoc. of Columbus; Dayton Printing Industry Assoc.; and Cincinnati Graphic Arts Assoc.; cooperating with the Dayton Public Schools Vocational Education Dept. The planning Committee as shown here consists of (seated, left to right) Howard Massman, printing trades ccordinator, Dayton Public Schools and president of Dayton Club of Printing House Craftsmen; Art Ballantyne, president, Columbus Club of Printing House Craftsmen; Loren Askins, Fifth District deputy reprensentative and conference chairman; and Wayne Hogan, trustee, Cincinnati Craftsmen's Club and director, Graphic Arts of Cincinnati. Standing are Frank R. Somers, secretary of P.I.A. of Dayton; Lou Madden, past president of Columbus Club of Printing House Craftsmen: Lee Augustine, president of the Cincinnati Club of Printing House Craftsmen; Clare L. Campbell, president of the Printing Arts Assn. of Columbus; and Reid Vance, executive secretary of Printing Arts Assn. of Columbus. Speaking at the morning session on Personnel Recruitment and Testing with Loren Askins presiding, will be Robert E. Kline, supervisor, Factory Education-Training, N. C. R. Company, president, Dayton Board of Education; Marguerite Hammond, chief, Testing Section, Ohio Employment Service, Columbus, O.; Howard Massman. The question session will be led by Wayne Hogan. Speaking at the afternoon session on Personnel Selection and Training will be K. C. Detweiler, personnel director, U. S. Printing & Lithographing Co., Cincinnati, O.; Frank M. Voelkl, superintendent, Forms Division, The Standard Register Co., Dayton, O.; and Byrl Shoemaker, supervisor of Trade and Industrial Education, State Department of Education, Columbus, O. At the closing dinner Lee Augustine will preside. Samuel M. Burt, executive secretary, Education Council; and Harry Porter, vice president, Harris-Seybold Co., Cleveland will speak. Reservations should be made through Conference Chairman Loren Askins, Gebhart Folding Box Co., 20 S. Dutoit St., Dayton 2, O.

ATF Appointments—Harry E. Stoddard and Veo K. Pearson have been appointed regional managers of the Type Sales Dept., American Type Founders. Under direction of Jan van der Ploeg, type sales manager, they contact all authorized ATF type dealers in the U. S. Stoddard joined ATF's New York sales organization in 1944. Pearson joined ATF in 1955 to assist in establishing the type dealer program. Stoddard will cover eastern U. S., Pearson the Western States. R. A. Tobias, vice president of sales, announced the appointment of Robert F. Garty as assistant to D. G. Manley, sales manager, Sheetfed and Resale Products Div. Garty is a graduate of Rochester Institute of Technology, Dept. of Publishing and Printing. He is a member of the Club of Printing House Craftsmen of New York, N. Y.

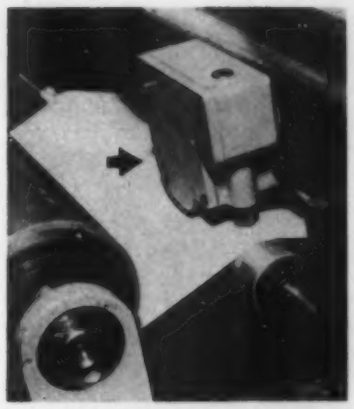


Fig. 1.—Web scanner which is a part of the Champlain Company's Registron for maintaining register on a rotary printing press.

Uses of Electronics In Graphic Arts Industry

By FRANCIS A. WESTBROOK

PART I.— PRESS REGISTER CONTROLS

Electronic devices are now being used more extensively in the Graphic Arts industry in operations where close automatic control is required. Such applications include printing press drives, register control in color printing, photoengraving machines, control of cutting machines on which printed labels are cut in quantity and in register, for stopping envelope machines in case they miss feeding envelopes flat to the gluing attachment, for counting conveyors, for measuring instruments used to secure and maintain uniform tone, automatic color separation, and a number of other devices which are as yet in the prototype stage. The results are usually satisfactory, especially from the standpoint of producing quality work with greatly reduced wastage. There are a number of reasons for this.

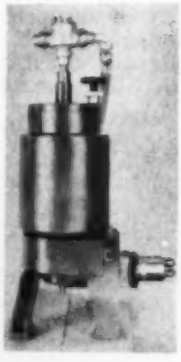


Fig. 2.—Photoelectric phase detector on a rotary web printing press. In conjunction with the web scanner (Fig. 1), whenever the register mark on the web deviates from its proper position an electrical impulse is generated which is passed to the control unit.

For instance, the introduction of color printing on magazine and newspaper presses has created a number of problems which were not present in the past on black and white, and they have given a strong impetus to automatic register control. It is obvious that a considerable amount of dissatisfaction will arise on the part of the advertiser if he contracts for a multi-color display and finds copies on the street in which poor reproduction appears.

The high speeds at which modern presses run make it practically impossible for the pressman to view each copy and to make the changes necessary to hold register. Furthermore, the press operator does not see the copy until after the printing is done and it arrives at the folder, which, of course, is too late. On the other hand electronic control can detect the error at the instant it occurs and before actual printing takes place, so that corrective measures can be taken

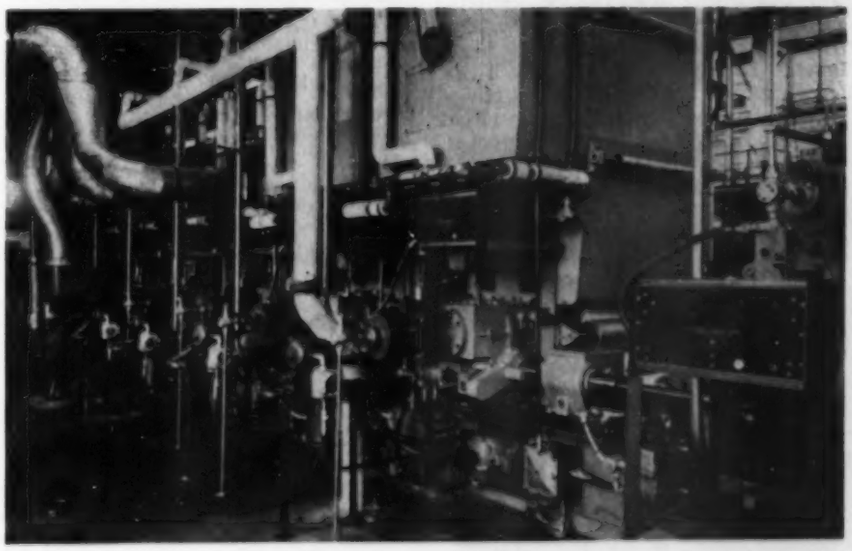


Fig. 3—Rear view of a rotary printing press showing phase detector and control units which are parts of the Champlain Company's Registron color register equipments.

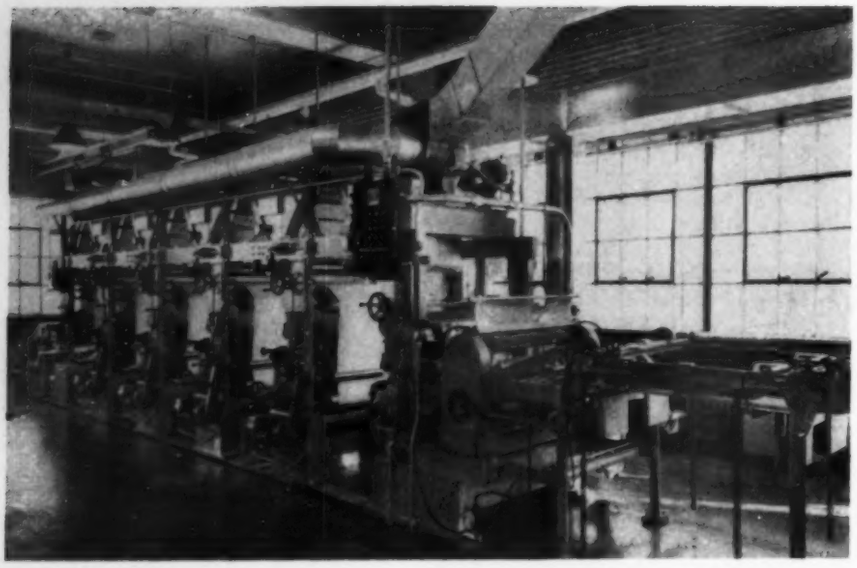


Fig. 4.—Rotary printing press equipped with Electric Eye Equipment Co.'s Hurletron automatic circumferential register control. The control panel is mounted at the upper frame of the delivery end of the press.

before poor work results, with the inevitable accompanying waste.

This removes the worries of the pressman so far as running accurate register is concerned and gives him more time to concentrate on color density reproduction and the many other duties with which he is faced in the average magazine or newspaper pressroom, or other color printing establishment, especially where high speed work is involved.

It will be of practical interest to consider as briefly as possible some of the electronic devices which have been developed to serve these purposes.

Champlain Registron

The Registron, made by the Champlain Company, is designed for automatic registration control in the operation of high speed web fed rotary presses and other high speed rotary operations such as cutting and roll fed die cutting. It consists of a web scanner (Fig. 1), photoelectric phase detector (Fig. 2) control unit and correction motor. The web scanner monitors the web to predict an off-register condition before the web reaches the printing cylinder by means of a register mark or solid color area predetermined at the first color printing unit. This register mark moves through the optical field of the scanner and whenever it deviates from its proper position an electrical impulse is generated which is amplified several times and passed to the control unit. The latter makes instantaneous advance or retard corrections so that accurate registration is assured.

Control of the angular position of the printing cylinder versus the web is automatically taken care of by the phase detector. As the angular position varies the phase detector sends signals to the control unit indicating a misregister condition which calls for an advance or retard correction. The phase detector is coupled to the rotary cylinder shaft so as to rotate in the same cycle with it. The latest model can detect a variation of 0.0025 in. either way from perfect register and send signals for appropriate correction to the control unit. It also operates accurately over a speed range from idling to 1500 ft. per min.

In Fig. 3 is shown the rear of a rotary press with individual Registron control units at each printing cylinder connected by cable to their respective phase detectors and associated web scanners.

The control unit is made up of the various selective circuits, amplifiers, gating circuits and wave shaping circuits. There is also an automatic leveling element in the web circuit which eliminates the need of a manual sensitivity control, thus reducing the liability of errors due to the human element in setting up controls. Provision is furthermore made for phasing to secure accurate register on a specific portion of the copy when the press is not in operation. Pulsing or continuous correction is provided for by a selector circuit, and in the latest models there are other circuits for automatic fine phasing while the press is in operation or standing still.

With Model 293A only two controls appear on the panel of the control unit, namely, a control for correction time and another for correction type. The first of these determines the period of operation of the correction with each impulse when the correction type selector control is set for pulsing correction. When the correction type selector control is set for continuous correction the motor operates until the correction has been made. On the 293B model switching from pulsing to continuous is automatic, which eliminates the correction type control.

Remote master controls may be had for one to three Registron units or for four or more to provide for remote control of all register functions. Each is supplied with a built-in voltage regulator.

The experience of numerous users of this electronic equipment bears out the statements which have been made. For example the Beech-Nut Packing Co. operates two modern Champlain four color presses so equipped. The pressman is relieved of much work and can devote more time to other phases of his machine. The result is better register, better uniformity of color, less scrap, high efficiency and more economical operation. Maintenance has been moderate and consists mainly of replacing relays or tubes after long periods of use. The power consumption is very small and the only direct operating cost. Electric eyes are considered indispensable here in holding fine register where the design is small and the register tight in multi-color gravure high speed printing with which the human is unable to cope.

Hurletron Register Control

The Hurletron circumferential registration control, made by the Electric Eye Equipment Co., is used by many city newspapers, such as the Washington (D.C.) *Post* and *Times Herald* and the Indianapolis (Ind.) *Star,* among

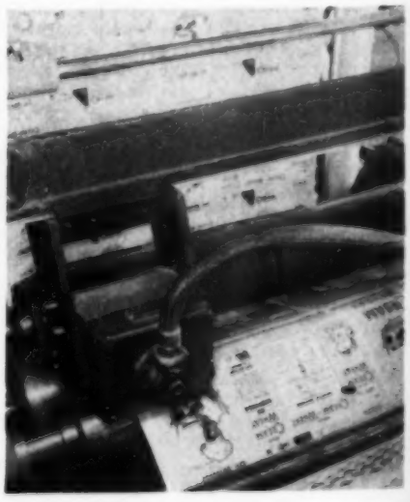


Fig. 5.—Sectional view of a package printing press equipped with miniature scanner which is part of the Electric Eye Equipment Co.'s Hurletron Register Control.

numerous others. It is also used to maintain color register automatically in the multi-color printing of thin or heavy paper, foils, Cellophane and various packaging materials, to accuracies within a few thousandths of an inch, from low up to the highest operating speeds. This includes high speed corrections at splices to reduce off-register waste and provides pressmen with a continuous visual indication of running register to enable them to make adjustments in known amounts.

This system utilizes a single target mark printed each revolution by the first down color cylinder. A scanner (electric eye), now located ahead of the next color cylinder watches the web for the passage of this mark and establishes the exact position of the web at the instant the mark passes. A selector switch or timing mechanism is attached to each plate cylinder following the first down and performs two functions. First, it alerts the amplifier, which is the brain of the system, when the work is about to pass. Second, this selector switch electronically tells the system where the plate cylinder is in its 360 deg. rotational path.

If the signal from the scanner, created by the passage of the mark, and the proper signal from the selector switch reach the amplifier at the same instant, the web is in register with the next printing cylinder and no correction will take place. However, should the scanner signal arrive at the amplifier ahead of the selector switch signal, the color already down on the web is coming into impression too soon and misregister will result unless compensation is made. When this condition occurs, the control measures the exact amount of deviation from absolute register and analyzes what is to be done. If signals indicate only a minute deviation from absolute register, an integrating circuit accumulates impulses until a definite trend is established showing a continuous out-of-register condition in a given direction, at which time the compensator moves slightly to return the register to the pre-set zero point.

The greatest shifts in register usually occur when the press speed is changed and when splices are made. At such time a proportional circuit takes over from the integrating circuit to actuate rapid compensating moves of relatively large magnitude when necessary to minimize noticeably excessive misregister. At the same time the integrating circuit prevents hunting and assures the very fine control necessary for close running register. Consequently, with the dual circuit system there is a minimum of printed waste and out-of-register printing, and maximum operating efficiency.

Normally the pressman starts on manual operation by using the pushbuttons on the master control panel for the first registering-in. During this process on the latest models an Auto Register follows the register automatically as the pressman sets it up manually. When the Hurletron is synchronized with the press all lights on the master control panel are out and the switches on this panel are then turned from the Registering to the Automatic position, after which the Hurletron maintains the pre-set register very closely. A press with this equipment is shown in Fig. 4. In Fig. 5 is shown a package printing press equipped with a miniature scanner, indicating equipment's versatility.

The mention of the word electronics has tended in the past to cause concern to the layman due to the fact that it appears to be a mystery. However, the manufacturers have recognized this and have taken precautions in the design of the circuits to make these controls a *Go* or *No go* piece of equipment. For instance, electronic tubes are utilized in such manner that they either operate satisfactorily or the unit does not operate at all. This means that the trouble may be detected by the simple expedient of putting the tubes in a tube tester. Extensive effort has been made in simplifying the complete circuit to the point where the average electrician can check the system and determine whether or not optimum efficiency is being obtained. For instance, the Washington (D.C.) *Post* has had no trouble and the maintenance electricians have been able to do what little has been necessary without difficulty.

Dials provide the pressmen with continuous indications of the running register which, of course, they could not inspect visually until after the work comes off the press.

These controls, although first developed for color rotogravure printing, are equally suitable for color fed letterpress work and are used by many of the largest magazine printers.

(To Be Continued)

Patents Have Been Bought

Announcement that the Haloid Company is buying over 100 world wide Xerographic patents and patent applications from Battelle Development Corp., wholly owned subsidiary of Battelle Memorial Institute and Chester F. Carlson, inventor of Xerography, was made recently. Xerography is a dry electrostatic process of graphic reproduction. The arrangement was approved by the Haloid and Battelle boards of directors. It provides that Haloid will pay 25,000 shares of its common stock to Battelle on or about Jan. 2, 1957 and 10,000 shares at the end of each of the years 1956 through 1958.

Press Lease Plan Announced by ATF

American Type Founders has announced that effective immediately all ATF Sheet and Web Fed and ATF-Mann Presses will be available on a lease basis. R. A. Tobias, Vice President in Charge of Sales, stated: "This is another step in American Type Founders' new plans to offer increased services to the printing industry. These leasing arrangements have proved popular in other equipment fields."

Under the new ATF plan, any equipment purchases of $1 thousand or more can be handled in this manner. The original lease extends for a period of 62 months and it can be renewed on a much reduced rental basis for continuing periods at the printer's option.

Normal trade-ins will be handled by ATF and under this plan part of the trade-in will be applied to the initial payment required with the shipment of the press and the balance, if requested by the customer given in cash. Otherwise all of the trade in value may be applied to reduce the obligation. Installation and erection costs are included in the rental.

All payments can be applied as operating expense and are fully tax deductible, because of the 62 month contract, monthly rental payments are substantially less than the normal equipment financing costs.

PRINTING
WEEK

OBJECTIVES
RINTING WEEK

Printing Week 1956:
Greatest in History

Any way you want to measure it, International Printing Week for 1956 was the biggest and best yet. Approximately 220 cities took part in the celebration. That is almost a 40% increase over the 158 city total posted for 1955. The distinguished list of government and public notables who participated in Printing Week celebrations testifies to the growing recognition of the event. Led by the Honorable Charles E. Wilson, secretary of defense, a parade of state governors and city mayors spoke at International Printing Week Banquets. Wilson accepted the Franklin Award for Distinguished Service of the New York Employing Printers Assoc. for President Eisenhower.

International Craftsmen officers—President Tommy Tommansini, First Vice President George Wise, and Second Vice President Ferd Voiland—were almost literally torn in two by demands for their appearance during Printing Week. Even International Printing Week Chairman Floyd Larson, indefatigable Printing Week promoter that he is, hinted in his bulletin of Jan. 18, that the list of people wanting Printing Week material had grown to the point where it took supreme effort to manage it. There was, however, no indication that he couldn't manage it. But it has grown apparently into a live wire list of the industry that packs a high voltage along about January each year.

What happened in Cleveland, O., this year—traditionally one of the cities in the forefront of Printing Week celebrations—may be indicative of things to come on a national scale. A new group was organized in that town, the Graphic Arts Institute of Cleveland, "to serve as a permanent and coordinating council for Graphic Arts educational and public relations activities in greater Cleveland." This group's first action was to appoint a Printing Week chairman and take on the responsibility for underwriting that activity.

The point is that more than 40 different groups and associations, besides the Cleveland Club of Printing House Craftsmen, are participating in the Institute. The purpose is to further broaden the base of Graphic Arts groups actively supporting the International Printing Week observance.

A significant portion of almost every International Printing Week celebration in 1956 made reference to the 250th anniversary of the Graphic Arts patron saint, Benjamin Franklin. As usual the Franklin Institute, Philadelphia, cooperated enthusiastically with the International Printing Week Committee. Thousands of plastic bound sets of 10 booklets on Benjamin Franklin's life and writings as they apply to the Graphic Arts, were distributed.

Last, but certainly not least in the hearts of men, the 1956 crop of beauty queens were crowned in suitable style. Smiling their way across thousands of printed pages, these lovely ladies publicized the printer's art and profession in an incomparable manner.

Personalities of International Printing Week 1956

Fig. 1—Mark Carothers, treasurer of the International and secretary-treasurer of the Dallas Club of Printing House Craftsmen, receives the International Printing Week proclamation for the state of Texas from Allen Shivers, governor of Texas. Looking on during the signing ceremonies are Van Walton, (left), president of the Austin Club of Printing House Craftsmen and R. M. Miller, president of the Houston Club.

Fig. 2—Attending Cleveland's 1956 International Printing Week All-Industry Banquet, Jan. 17, were Miss Graphic Arts, Shirley Schneider (center), and her two attendants, Marlyn Rae Warner (left) and Irene Meyers (right). Distinguished Cleveland Graphic Arts personalities at the banquet included (left to right): Ben D. Zevin, president, World Publishing Co., and of the Graphic Arts Institute of Cleveland; Harry A. Porter, vice president, Harris-Seybold Co., and winner of the A. F. Lewis Graphic Arts Man of the Year award; Fred W. Baker, Cleveland 1956 Printing Week chairman; Arthur W. Hogling, president, Western Newspaper Printing & Matrix Co., and of the Cleveland Craftsmen's Club; George Wise, superintendent of Dugan-Millis, Inc., and International First Vice President of the Craftsmen; and Thomas G. Roberts, vice president, A. S. Gilman, Inc., and president of the Printing Industry of Cleveland, Inc.

Fig. 3—Everyone was happy that Anne Fleming was selected as Miss Etaoin and Jenny Lee was chosen as Miss Shrdlu for the International Printing Week 1956 celebration of Los Angeles, Calif. That included Dale Magor, co-chairman (left), and Tim O'Keefe, chairman (right), of the 1956 Printing Week Committee in Los Angeles.

Fig. 4—Instead of the usual beauty queens, Toledo, O., picked Larry Drown (left) and Frank Sibberson (right) as Printers' Devils of 1956. The Toledo Printing Week Committee and Toledo Craftsmen chose the two boys from the Boy's Club of Toledo to represent the future printers of the city in the International Printing Week celebration.

Fig. 5—Miss Betty Klepper was selected as Miss Perfect Type for the San Francisco, Calif., International Printing Week 1956 celebration. Miss Klepper is 18 years old, has brown eyes and is a brunette.

Fig. 6—Deborah Nuin was chosen Printing Week Queen in the International Printing Week celebration held in San Juan, Puerto Rico. Members of the Printing Week committee included Jose E. Natal (left), of the Economic Development Administration; R. Torres Mazzorana and William Gil, of the department of education.

Fig. 7—Miss Printers' Devil of 1956 for New Orleans' International Printing Week celebration was Judy Bennett, shown chatting with Printing Week Chairman Ernie Jilek (right) and Warren Forstall, Miss Printers' Devil committee chairman. Forstall is holding the traditional newspaper hat with which he crowned Miss Bennett.

Fig. 8—Chicago's 1956 Printing Week Proclamation was signed by Chicago's Mayor Daley. Grouped about the mayor are (left to right) Edward M. Egan, the Chicago Club of Printing House Craftsmen's second vice president; Lowell L. Dummer, first vice president; Steve Sluka, immediate past president; G. W. Bassett, chairman of Chicago's 1956 Printing Week; and Harold E. Sanger, president of Chicago Craftsmen's Club.

What Miehle is Doing For Letterpress Printer

By CHARLES A. HARWOOD*

**Field Sales Mgr., Miehle Printing Press and Mfg. Co. Abstract of address given before annual convention of the Intl. Assoc. of Electrotypers and Stereotypers, Inc., Washington, D. C., Sept. 1955.*

My company manufactures sheet fed printing equipment only at this time—so what I have to say will be limited to that field. We deal primarily with the general commercial, label, book, specialty and carton printers.

All printers have at least one common goal and desire—reduction of their production costs so as to increase the possibilities for greater profit. The squeeze is tight. It's getting tighter.

I recently listened to Peter S. Nagan, managing editor, *Report on Business Outlook,* at the PIA Convention in Atlantic City, N. J.

Automation In Demand

There's no doubt in anyone's mind, we're on the top of a fine boom today. Our rate of economy is high. As time passes, people will demand more and more automation, automatic inspection, new processes, new and stronger light metals, with new uses for the new alloys. So what can the printing industry expect? Nagan says about a 25% gain—although the overall gain will be greater in 1965. How can we use these new technological developments? It's a challenge to all of us.

Color Rotary Perfector

Our Research and Development Department projects are today about 65% on letterpress. The new Rotary Perfector Letterpress has been designed primarily for the production of books. It is an essential machine for the book manufacturer, capable of producing three times sheetfed flatbed presses, five or six times single color flatbeds of equal size. The Rotary Perfector Press is made in units. So we can produce up to four colors on one side with one color on the reverse side. Some features of the press are: Ample room for operator to put on plates; can use overlays by having individual single impression cylinders to speed up makeready; the units can be declutched to plate up several units at the same time; a slitter and perforator can be added.

Indirect Rotary

A recent development is the Indirect Rotary. It's in the development state although several presses are in operation today. The Indirect Rotary press can provide the typographical printer with new equipment and place him in a more favorable position with respect to the competitive advantages of offset printing.

Here's what an Indirect Rotary looks like. It's a three cylinder press. At the top is a patent base cylinder for curved electro plates. The second cylinder is a blanket cylinder and the third is an impression cylinder.

Possible Advantages

Here are some of the possible advantages to the typographical printer:

(1.) A wide range of paper stock, especially as to the surface roughness.

(2.) Freedom from plate smashes is assured due to the interposed blanket cylinder between the plate and impression members.

(3.) A smooth lay of ink in the solids is indicated — more like offset.

(4.) More ink mileage is indicated. This item can result in an estimated 20% to 30% savings in ink cost, based on conservative speculation.

(5.) Due to less printing pressure, longer plate life is indicated.

(6.) Also, as a result of less printing pressures, plates do not shift during running, therefore initial plate register is maintained throughout the run.

(7.) Under ideal conditions, makeready time should be reduced materially making a quick getaway possible.

(8.) A reduction in the amount of anti-offset spray is a possibility.

(9.) Offset printing without a dampening mechanism.

Problems To Be Solved

But here are some problems to be solved:

(1.) Since extreme accuracy in the flatness of the plate surface is an essential requirement, it will be necessary to determine how or where such a plate may be obtained or procured.

(2.) Halftones are not readily reproduced with the present standard quality of electrotypes. Therefore it will be necessary to determine the exact characteristics required in printing plates to assure quality halftone printing.

(3.) There is a possibility for blanket embossing. Current tests have discounted this almost entirely; however, there has not been a sufficient amount of running to establish a firm fact in this respect.

(4.) Paper dust from dusty piles may accumulate on the blanket and cause imperfect printing during the run. Only long runs will indicate whether or not this will be a problem.

Indirect Rotary printing can be an important cog in the wheel. There is much work to be done. By working together many of the problems can be solved. We invite your cooperation for the betterment of the industry. Our Research and Development Departments welcome your suggestions.

Press for Carton Industry

The carton industry is interacted in this development. At least one press is in operation in the carton industry. One in particular comes to mind. This is a four color No. 76 Offset Press with a fifth unit Indirect Rotary. This customer tells us the Indirect unit fits the bill perfectly for his use. His company uses it for an economical name, weight or size change on ice cream cartons, butter cartons, etc. He tells us that it is cheaper and quicker to hook on a small curved electro plate than to put on a full offset plate. So other fields will find this Indirect process to their liking. Although this is a specialty use, we feel that the Indirect Rotary has high possibilities in the carton field. Carton printers are familiar with the letterpress process. They want to stay in the letterpress field. With technological improvements, they will. But developments have to be made to allow them to do so.

The letterpress printer must of necessity reduce his costs to remain competitive. We are looking toward this end by working on makereadyless types of letterpresses. The press will be ready—we call on you for the plate, whether it be a thin magnesium wrap around plate for a small Rotary or for existing large Rotary Presses.

Fascinating Look

(Continued from Page 32)

had available to them the test and measuring equipment that is as sensitive and precise as that available today. For example, in the design of one of the new presses the engineers had the problem of holding a pin point dot on a plate on one printing cylinder in precise alignment (register we call it) with a similar dot on a second cylinder 6 ft. removed while running at speeds up to 2000 ft. per min., without benefit of adjustable compensation. This is watchmaker tolerance on 400 T. machinery. The first job was to measure the fault, if any. To do this, a new measuring device had to be invented that would operate with micrometer preciseness while the press was running at full speed.

In printing with heat-setting inks, the paper changes dimension in moving from one printing unit to another. The degree of change may vary from one roll of paper to another. It must be compensated for quickly and accurately or a series of paper breaks result, shutting the equipment down and ruining its efficiency. Now, we have the means to measure *exactly* these dimensional changes while the press is in operation. And with the ability to measure, we can automatically compensate for these changes and thereby avoid frequent shut downs for this cause.

Ink Drying Equipment

Reaching into the new knowledge gained by the aero-dynamic engineers, the printing scientist has come up with an important advance in ink drying equipment. Air at speeds up to 600 m.p.h. is now being used in conjunction *with heat* to dry ink faster and with less wear and tear in the paper. Perhaps, you have noticed if a heavy rain is followed by a bright sun and a strong wind, how quickly your sidewalk or street dries up. That is the principle. The ability to dry ink faster facilitates faster printing. Contrary to some well-held opinions, the faster you print the better you print.

I can tell you that the folding of the printed web in a continuous process at the end of the press into groups of pages can now be done at almost any practical speed. Here again, new science in the field of measuring equipment has played an important role. In folding, it is necessary to stop a flimsy sheet of paper traveling at 25 m.p.h. and reverse its direction. The problem has been solved through the use of high speed photography—a movie camera that takes pictures at the speed of 3200 pictures a minute. Mechanical engineers studied the slowed-down movies of a folder in operation to learn how to engineer it for high speed and eliminate its bugs.

Fast Magazine Processing

The product coming off magazine presses today is handled manually. Up to now this has been good enough. But a press operating say at 2000 f.p.m. will put out 10 T. of printed pages an hour. Perhaps such tonnage could be handle by a bucket brigade of people, but it makes more sense to use a machine. Several such machines are under development and there is no doubt that one or more of them will be a success.

Within a matter of a year, magazine production will have new binding equipment which will more than double present magazine assembling speeds and make the operation virtually automatic.

Machine Coated Paper

The late 1920's produced two of the most significant advances in the science of communication via printing that have occurred in the last 100 years. One of them was printing with heat setting inks. The other was the ability to coat paper in a continuous process on the paper machines.

Machine coated paper brought to the large circulation magazine top reproduction quality at a price that could be lived with. We have not seen the end but only the beginning of this great development. The scientist and engineer are *at work*. The emphasis at the moment is on higher papermaking and coating speeds, but there is some delving into the science of psychology. Is there a better, more effective way, to get over to the public and the advertiser the feeling of *richness and quality* in a printed reproduction? We say now that the way to do it is with high gloss, high light reflecting paper coatings. But is it?

Can It Be Made from Sand?

And what about paper fibres? Are we tied forever to a fir tree? Or can we make paper out of any good sand pile? At the moment, the *fog* is too thick to get a sense of direction in this area. But the scientists have their radars in operation. It is only a matter of time when the sailing orders will be posted on the bridge. My private guess is that we will see some big new changes in this area.

Engineering and construction is already well advanced which will bring large benefit and opportunity to the short run publication and commercial printing fields.

These new developments will permit the production of newspaper, magazine, and short run printing, having print orders as low as 25,000, to enjoy most of the economies now enjoyed by the large print order printing.

Packaging Industry Progress

The packaging industry is making technical progress in seven league boots. For example, it is in the packaging field where the paper industry at the moment is making perhaps its greatest technical progress. Paper board producing paper machines are rapidly getting wider and faster in operation. It is not unheard of now to make packaging papers, for instance, in a ribbon 20 ft. wide at 25 m.p.h.

And along with everyone else, the packaging industry is getting *quality conscious*. They are realizing that when Lizzie Twitch walks into a store with a full purse under her arm, it is important, for instance, that the illustrations of peas on packages ought to look like peas just plucked from the pod. Therefore, the trend is toward paper finishes and coatings that will print with excellent results and printing equipment and methods that will produce a selling reproduction. And here again the scientist and engineer is hard at work to produce what is wanted.

Well, that is a quick review of some of the things that are going on in the old science of communication via printing. It by no means tells all because the "all" would take a week of telling. What we have discussed is not what is going to happen *someday*, it is what is going to happen within the next ten years and probably five—a lot of it starting now.

SKOTVEDT

Jubilee in Oslo—Norsk Grafisk Leverandorforening (association of Graphic Arts suppliers) celebrated its 50 yrs. Jubilee recently in Oslo, Norway. Association members have had a scrapping agreement since 1931 in order to remove old printers' machines from the market. A similar agreement was reached with bookbinders and offset printers. The following firms in Norway are members: Gjestvangs Grafiske Fagforretning A/S, Grafisk Kompani A/S, Olaf Gulowsen A/S, Hiorth & Faerden A/S, J. W. Luths Eftf., Sandberg & Co., Oscar Skotvedt, Jens Aanesen. President of the N.G.L. is Armin Skotvedt.

A. A. Saul Named Miller President

Miller Printing Machinery Co., a subsidiary of the Commercial Credit Co. has announced the appointment of August A. Saul as president of the company. He succeeds R. B. Tullis who resigned.

Saul is New Miller President

Saul was first associated with the Miller company in 1925 when it was known as the Miller Saw-Trimmer Co. He has held the following positions: Design engineer, assistant chief design engineer, chief ordnance engineer, chief engineer, director, and vice president in charge of engineering and manufacturing. Saul stated that he would continue the established policies of the Miller company. According to Saul, the Miller European operations will be stepped up. After the installation of the first German built Miller 27 in. by 41 in. SY letterpress, production of these presses will be increased from the German printing press firm, Maschinenfabrik Johannisberg, G.M.B.H. of Geisenheim/Rhein, where Miller has a majority interest. Saul also reported that operation of Miller's former wholly owned subsidiary, the Kerotest Manufacturing Co., which was merged into the parent Miller company during the past year as a division, is continuing satisfactory operation.

R. B. Tullis Chosen H-S Vice President

George S. Dively, chairman and president of Harris-Seybold Company has announced that Richard B. Tullis has been named vice president of Harris-Seybold. Tullis resigned as president of Miller Printing Machinery Co. in order to join Harris-Seybold. He will head the marketing program for Harris-Seybold and also direct and further development of the company's foreign operations. Tullis, recently elected to his third term as president of the National Printing Equipment Assoc., has had 17 years of varied experience in the Graphic Arts industry, all of it with Miller. He has been president of the firm since Jan. 1, 1952, and during that time was responsible for the organization or purchase of subsidiary companies in England, Switzerland and West Germany. His early career was all in sales work, both prior to joining Miller and during his first four years there. He handled defense work for the company during World War II, and became vice president of manufacturing in 1946. He was elected sales vice president in 1949. Under his direction, Miller entered the offset printing press field after the war, in addition to becoming active in European operations.

Tullis Named H-S Vice President

Metallic Ink Practical For Speedy Production States Curtis Pub. Co.

What it believes to be the first metallic ink which is practical to run in large editions on high-speed presses is now available to advertisers in its magazines at no extra cost, The Curtis Publishing Co. announces.

Edward C. Von Tress, vice president and executive director of advertising, said the new ink, developed by the company's manufacturing department, provides a "high degree of reflecting power and is available in a wide range of colors."

He continued: "It gives a fine sheen, not only to gold and silver, but also to shades of red, yellow and blue. One of its most effective uses is in providing a background color, and as such, it may be used as one of the colors in a two or four-color advertisement.

"The ink will not rub off under ordinary handling, and has considerably less tendency to tarnish than ordinary metallic inks. To date, it is not practical to run this ink on halftone screens, but with continuing experimentation it is hoped that this problem may be solved later. The ink cannot be used as one of the process colors in four-color illustrations.

"We feel that the ink is uniquely effective for product and packaging identification. The results are especially pleasing when it is used to simulate gold, and it is therefore of particular interest to firms celebrating an anniversary where the gold motif is desired.

"The process is first being used on an editorial spread in *The Saturday Evening Post's* issue of January 21st.

"The new ink is immediately available to advertisers in *The Saturday Evening Post, Ladies' Home Journal,* and *Holiday.*"

Graphic Arts Equipment and Supplies

Literature for the Asking

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please ask for the pieces selected by number and send your request to Literature Dept., *Printing Equipment Engineer,* 1276 West Third St., Cleveland 13, Ohio.

Composing Room

LINOTYPE BOOKLET

A booklet in which is described the Models 39 and 30 Mixer Linotypes, has been printed by Mergenthaler Linotype Co. The three-color, 13-page booklet is used to describe how these machines can deliver intricate mixed composition at keyboard speed. Many drawings and photographs are used to show the engineering features of the units. Please mention PEE No. 49L in your request.

MECHANICAL TYPE TIEUP

Composing room executives, compositors and makeup men will be interested in the six page bulletin published by Continental Enterprises. The illustrated bulletin is descriptive of the Quick-eze mechanical type tieup. Quick-eze is made in three standard sizes, is constructed of zinc alloy adjustable frame and cadmium plated wire springs. The four step tieup is clearly illustrated along with correction and lockup instructions in the bulletin. For a copy, please mention PEE No. 50L in your request.

JUSTOWRITER COMPOSING

The Justowriter, the automatic tape operated justifying composing machine, manufactured by Commercial Controls Corp., is illustrated and described in an eight page bulletin. One keyboarding of the recorder produces copy and punched tape. The punched tape is then used to set justified proof or direct image plates on the reproducer at 100 words per min. In the bulletin the 11 Justowriter type styles are shown and one page is devoted to Justowriter specifications. For a copy, please mention PEE No. 51L in your request.

FILMOTYPE FINANCE PLAN

To provide prospective Filmotype users with information about the Pays-for-Itself Plan, the Filmotype Corporation has published a four page bulletin. The plan, specially designed for firms using display type and hand lettering, is a rental system for office or plant. For a copy, please mention PEE No. 52L in your request.

Platemaking

GRAFARC CAMERA ARC LAMP

Jumbo type carries the description and specifications of the Strong Electric Corp. Grafarc line of camera arc lamps in a four page, 8½ in. by 11 in. bulletin. Easy to read in minimum words, the basic story is there. Please mention PEE No. 53L in your request.

ROYLE BALL BEARING ROUTER

A four-page, 8½ in. by 11 in., two-color bulletin has been issued by John Royle & Sons on their ball bearing router. Several photographs are used to illustrate special features. A table includes specifications of size, weight and cutter speed. For a copy, please mention PEE No. 54L in your request.

CHEMCO MODEL 501 ETCHING MACHINE

Chemco Photoproducts Co., Inc., has issued a four-page, 8½ in. by 11 in., two-color bulletin on its Lever Control Etching Machine Model 501. The machine is shown in several close-up views. For a copy, please mention PEE No. 55L in your request.

VARIABLE RESPONSE UNIT

A report to the Graphic Arts industry on research and development of the Fairchild Variable Response Unit has been released by the Engineering Laboratories of Fairchild Graphic Equipment, Inc. The V.R.U. is an electronic quality control device which makes possible the exercise of precise control in modifying or altering tonal values of a reproduction. In the six page report is contained illustrations, produced on the Fairchild Scan-A-Graver electronic engraving device. Diagrams are reproduced in the report to show how the unit works. Variations of the gray scales are also reproduced. For a copy, please mention PEE No. 56L in your request.

ANSCO STRIPPING FILM

Ansco Reprolith Stripping Film is the subject of a 10 page, 5¼ in. by 7 in. booklet. The advantages and characteristics of this type of film are explained. Method of usage is also explained and illustrated with several photographic halftones. For a copy, please mention PEE No. 57L in your request.

FLUSH MOUNT TRIMMER

A new style trimmer designed to trim flush mounted cuts without raising burrs is the subject of a single page, 8½ in. by 11 in. flyer issued by The Ostrander-Seymour Co. A photograph of the unit, which is fitted with a motorized spindle and spiral cutter, is included. For a copy, please mention PEE No. 58L in your request.

ROBERTSON MANUAL OF OPERATION

A manual of operation has been issued by Robertson Photo-mechanix, Inc., on its Model AC, Seventeen, copy camera. This is a 47-page booklet which, with written copy and generous use of photographic illustrations, describes the assembling, use and maintenance of this piece of photographic equipment. Also included in the subject matter are features of the model Seventeen camera, optional equipment, parts lists and two pages of photographic nomenclature. For a copy, please mention PEE No. 59L in your request.

PHOTOMECHANICAL TERMS

A three page reprint from *Printing Equipment Engineer* (Aug. 1954) of the article, *Lexicon,* by George Jos. Lenzer, covers photomechanical terms used by platemakers for the three major processes. Also included is a key to platemaking requirements and transparencies required. A page of sectional diagrams is utilized to show how plates function to print by each process, reproduction and art copy, transparencies, and color separation negatives. For a copy, please mention PEE No. 60L in your request.

CAMERA LENSES AND PRISMS

C. P. Goerz American Optical Co. has issued a six-page, 4 in. by 9 in. folder on its line of Red Dot Artar lenses. Included are a table on the film coverages at various reductions and a table of approx. object and image distances for the Goerz Aprochromat Artar lenses. For a copy, please mention PEE No. 26L in your request.

COLOR PROCESS CAMERA

The Short Run Color Separation Camera being sold by the Short Run Color Corp. is the subject of a two-page, 8½ in. by 11 in. descriptive sheet. Features and usage are described. Some specifications are given. For a copy, please mention PEE No. 29L in your request.

Pressroom

ROP COLOR SIMPLIFIED

Newspaper plant managers, production managers, superintendents, foremen, editors, publishers, and photographers will find much of

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After you have selected the literature described in these pages which you would like to have sent to you, please jot down the identification numbers on this coupon and mail to

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interest in an excellent new booklet of r.o.p. color, prepared by Thomas S. Curtis, Sc.D. of Los Angeles. Called *R.o.p. Color Simplification*, Dr. Curtis' booklet explains the economics and techniques of color photography in the news field. It includes 10 color shots with technical explanations in readable form. Shown in this 32 page booklet are examples of problems encountered in this field by publications and relates how the problems were overcome. Also included are informative descriptions of Curtis Direct Color Camera, Optical Color Printers, Contact Color Printers, and the Color Analyst. A production flowsheet chart, and sections on color separation negatives, and tooling for r.o.p. color are of special interest. For a copy, please mention PEE No. 61L in your request.

MILLER 2-COLOR PRESSES

A four-page, 8½ in. by 11 in., four-color folder is used to describe the Miller 21 x 28 TW and 27 x 41 TY Two-Color Letterpresses. Samples of work which can be done are included as well as illustrations of the presses along with specifications. For a copy, please mention PEE No. 62L in your request.

INSIDE STORY

Miehle Printing Press and Mfg. Co. has released a six-page, four-color folder entitled *Inside R.T.K.*, in which is related the experience of Runkle-Thompson-Kovats, Chicago printers, with Miehle letterpress equipment. The many illustrations are both beautiful and instructive. Specifications on various Miehle offset and letterpress units are included. Please mention PEE No. 63L when requesting a copy.

PAPER FEEDING GUIDE

A booklet entitled *Pressman's Paper Feeding Guide* has been published by Roller Press. In the 12 page booklet is covered Wale Floating Nozzles with the wide horizontal floating nozzle for presses, offset duplicators and folding machines. Also explained are feeding problems in the handling of hard to feed stocks including cardboard, tissue paper, onion skin, as well as general stock. For a copy, please mention PEE No. 69L in your request.

Miscellaneous

RELIANCE DRIVES CARE

The four page bulletin, *How to Care for Jr.*, published by Reliance Electric & Engineering Co., is descriptive of the simple, but comprehensive program available to keep Reliance V-S Jr. Drives in operation at peak efficiency. Prepared primarily for maintenance engineers, in the bulletin is explained the complete line of services and parts available for these electronic variable-speed drives. The Renewal Parts Kits plan, the Replacement Exchange Panels plan, and the Standby Panels plan are described. Information in the bulletin also includes a complete listing of parts and prices, and instructions on how the various plans may be put into effect and illustrations. For a copy, please mention PEE No. 65L in your request.

PAPER SMOOTHNESS GAUGE

Illustrations, specifications and operational data are included in an eight page bulletin explaining The Sheffield Corporation's Sheffield Paper Smoothness Gauge. The instrument is a new type of air gauge developed to provide instantaneous, accurate measurement of paper smoothness. Also included in the bulletin are three correlation charts which show correlation of a reading obtained with the Sheffield Smoothness Gauge and with a currently suggested standard air leak-time lapse method. For a copy, please mention PEE No. 66L in your request.

SMALL SIZE AIR PUMP

The Dexter Folder Co. has published a bulletin in which is covered the Dexter-Conde Dri-Air pump and Dexter-Conde air filters. The pump is especially designed for applications having low c.f.m. requirements at pressure from 20 in. Hg to 10 psi. Included in the bulletin are illustrations showing rotary pump and air filter construction, and a specification table giving speed, capacity, maximum vacuum, and continuous maximum pressure for three pump models. In the air filter section, specification information and descriptive data cover the open model for air intake at the filter, and the in-line model for installation in vacuum lines. For a copy, please mention PEE No. 67L in your request.

VIBRATION CONTROL MATERIAL

Isolant, a line of vibration control material, is described in a catalog released by T. R. Finn & Co., Inc. Line drawings are used to illustrate typical installations and construction details. In the catalog is described the granular structure of the material, which is made up of millions of hermetically-sealed minute air cells that expand or contract according to the applied load. Types and thicknesses of the material, load ranges and standard sizes of the material are also included. For a copy, please mention PEE No. 70L in your request.

COLOR PACKAGE PRINTING

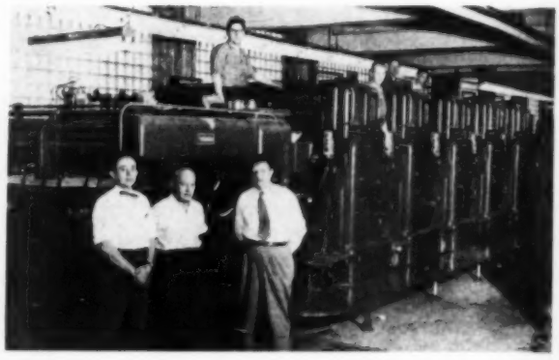
Rotogravure printing of four color carry home beer cartons is described and illustrated in a six page reprint offered by Champlain Company, Inc. The reprint is descriptive of how rotogravure equipment contributes speed and accurate color printing to a brewery's program. Details of package development and design are discussed, with a section descriptive of the step-by-step operation of the printing press. Seven illustrations show the gravure units, stripper, cutter, creaser and cases, as well as the finished product. For a copy, please mention PEE No. 71L in your request.

COATED OFFSET PAPER

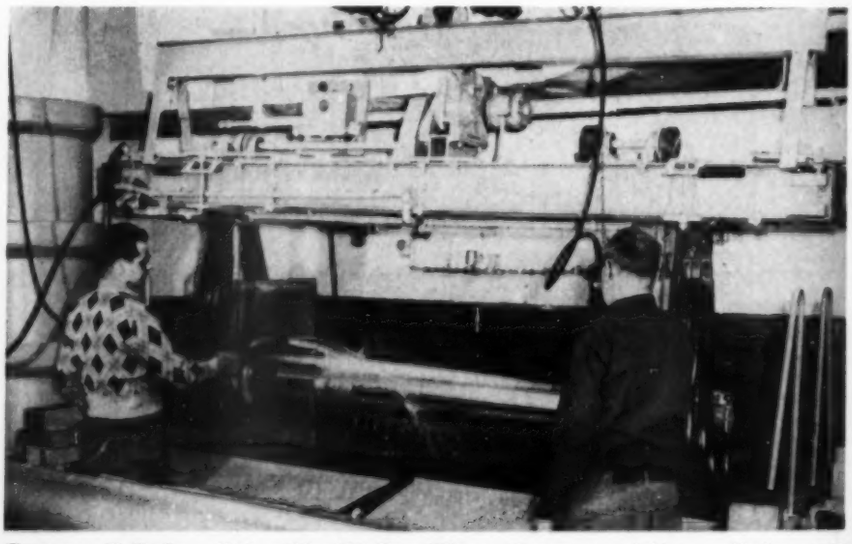
Champion Paper and Fibre Co. has a new folder on Wedgewood Coated Offset which demonstrates the intensity with black halftones, overcoming the objection to the weakness of offset blacks. The demonstration consists of making two impressions of black and from two different halftone plates. The first down is 150 line screen and the second is 300 line screen. Taking advantage of the use of two different blacks, a green tone and a red tone black were used; the green carrying highlight detail, the red the shadow detail. For a copy, please mention PEE No. 72L in your request.

ROTARY AIR PUMPS

A 12 page catalog, No. 755, has been published by Leiman Brothers giving the details of construction, dimensions, capacities and performance curves on the complete line of Leiman Rotary Air and Vacuum Pumps. Included are the 4-wing type, 2-wing type, double-cylinder type, motor-driven models, integral pump and motor, air motors and full line of accessories. For a copy, please mention PEE No. 68L in your request.



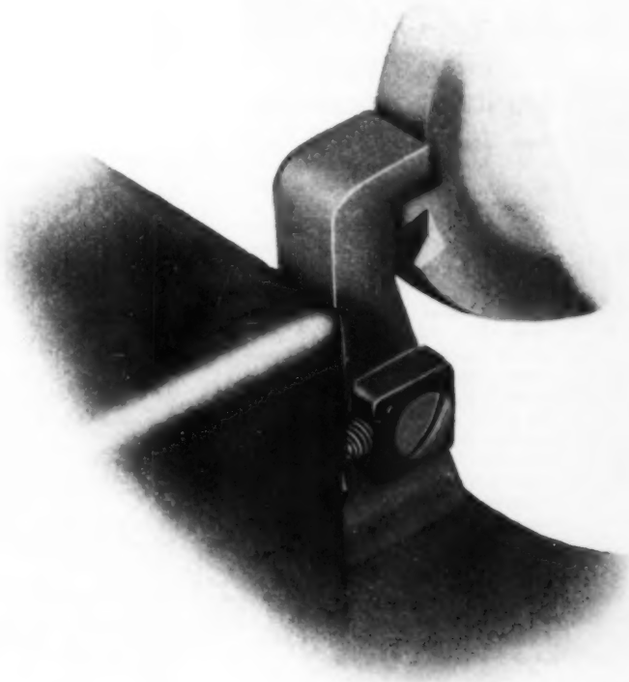
Three Miehle Offsets—The Strobridge Lithographing Co., Cincinnati, O., recently completed the installation of three new Miehle Offset Presses at a cost of over $500 thousand. The three new presses, all of which print a 52 in. by 76 in. sheet, are one Miehle No. 76 Five-color, a Two-color and a Single-color. In the same modernization program, Strobridge installed a complete pressroom air conditioning system and put in new lighting as well. Pictured here are (left to right) Andrew Donaldson, jr., plant manager; Frank Miller, foreman; and Harold Merten, vice president of Strobridge standing in front of the new Five-color press.



Gravure Cylinders Get a Pre-Plating Rinse—Gravure printing cylinders are given a warm water rinse prior to chromium plating in a specially designed, horizontal, 600 gal. electroplating tank at Art Color Printing Co., Dunellen, N. J. The cylinder is held on a work carrier yoke over the plating tank, which was designed and built by Hanson-Van Winkle-Munning Co. After the cylinder is rinsed, it is lowered into the tank by means of the yoke where it is completely immersed for 1 hr. During this period the cylinder is continuously rocked 90 deg. to the right and left. The rocking is said to assure a uniform chrome deposit. Plating bath is maintained at 113 deg. F. by vertical loop-type heating and cooling coils. Immersed in the bath are Chrome-Flo lead anodes, spaced 3 per ft. Plating current, passing through flexible plastic-insulated contacts, ranges from 2300 to 3400 amps., depending on the size of cylinder being plated. A thickness of about 0.00025 in. of chromium is deposited in the process.

THE TUBE THAT SAVED A MILLION MATRICES!

This small electronic tube is the heart of the Electromatic safety system that—by any reckoning—has saved a million mats. Standard equipment on all new mixers and Rangemaster Linotypes, this unique system is not just a device for warning; *it positively prevents costly damage* to matrices and machine parts during distribution. The latch shown below locks the elevating mechanism until green lights flash "all safe;" only then can the operator shift magazines. This Electromatic safety system is only one of the many *exclusive* features of Linotype that eliminate downtime and replacement expense . . . features that make Linotype the *world leader* in machine typesetting.



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LEADERSHIP THROUGH RESEARCH

PATENTS

For The GRAPHIC ARTS

Covering patents issued November 1, 8, 15, 22 and 29.

All new patents for the Graphic Arts are reported exclusively for *Printing Equipment Engineer* by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. *Printing Equipment Engineer* is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

•

Composing Room:

TYPOGRAPHICAL COMPOSING MACHINES

This typographical composing, casting and distributing machine uses a toothed pulley and a toothed belt drive for the star wheel assembler instead of the usual gear train. Patent 2,723,023 by Louis Rossetto, Paul Hilpman, and William B. Abbott, assigned to Mergenthaler Linotype Co.

TYPOGRAPHICAL CASTING MACHINES

Mechanism controlled by a jaw actuating device is used for equalizing the force applied to either or both line clamping jaws during a quadding or a centering operation to avoid "bleeding" of molten metal. Patent 2,723,024 by Edgar D. Oppenheimer, assigned to Mergenthaler Linotype Co.

COMPOSITOR TYPE CASE CABINET

The type case stand is of the kind in which a number of type cases are arranged for withdrawal drawers and which offers to the compositor a horizontal work piece on which a galley can be deposited and which provides support for a type case both in horizontal and in forwardly inclined position. Patent 2,723,127 by Emil Hunziker, assigned to Luscher, Leber & Co. A. G.

•

Platemaking:

DEVICE FOR USE IN MANUFACTURING ELECTROTYPES

The device is a curving frame for maintaining a shell exactly at its original length, and provides for even curving of the backing metal so that no buckling occurs from pressures which are set up within it and no distortions of the image on the shell occur from this cause. Patent 2,722,261 by Homer L. Bishop, assigned 30% to Earl E. Stansell.

•

Feeding, Folding, Delivery:

SEPARATION OF SHEETS OF PAPER OR THE LIKE FROM THE TOP OF A PILE

In this machine for feeding individual sheets into a printing press or other machine, a single cylinder is employed to elevate two or more suction grippers. This operation is effected by rocking a lever. Patent 2,722,416 by Headley Townsend Backhouse.

SHEET FEEDING APPARATUS

The apparatus is for use with a rotary printing press and employs pneumatic suckers and a hand device, the latter operating through a timing component which is actuated in step with the vacuum and non-vacuum periods in the operating cycle of the sucker and which operates to render the hand device effective only during the non-vacuum periods. Patent 2,725,229 by Alfred Piersene Battey, assigned to R. Hoe & Co., Inc.

•

Printing Presses:

STAPLING MECHANISM

The mechanism is of particular value for effecting stapling at high speeds of rotary printing presses, without dangerous heat generation of the stapling wire as it is being forced along the stapling horn. Patent 2,722,000 by George Turrall, assigned to R. Hoe & Co., Inc.

CONTROL FOR PRINTING PRESSES

In a device for changing over from single inking to double inking, the invention provides a set of permanently rotating cam discs each operating a roller lever which can be engaged and disengaged and neutralizes one of the control functions required for printing operations in case of single inking. Patent 2 722,176 by Friedrich Rupp, assigned to Maschinenfabrik Augsburg-Nurnberg A. G.

ROTARY WEB PRINTING MACHINE WITH TENSION CONTROLS

Accurately controlled mechanism is used for rewinding a web under controlled tension at any speed or during acceleration and deceleration periods by using paper roll surface contacting belts directly connected to the press drive through a variable speed device. Patent 2,723,620 by William F. Huck, assigned to Huck Company.

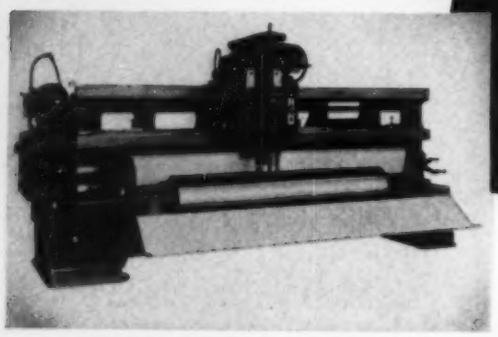
DRIERS OPERATING IN CONJUNCTION WITH PRINTING MACHINES

To prevent a freshly printed web from ink discoloration by the high heat of driers as the web reaches a position of rest, this drier provides a change-over device to cause the web to be exposed to low, harmless room temperature air. Patent 2,724,907 by Willy Walter, assigned to A. Monforts.

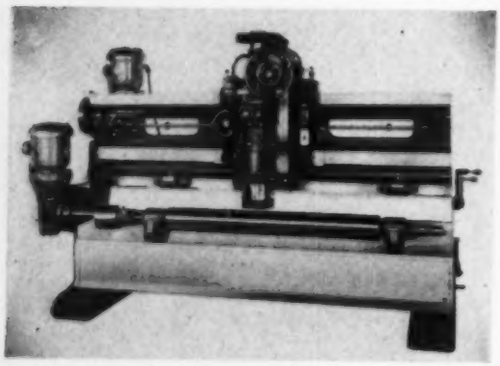
CYLINDER BEARERS FOR ROTARY PRINTING PRESSES

To insure clean and even printing impressions in a rotary flexographic printing press, the

For GRAVURE at its Finest



Model "HL" Grinding and Polishing Machine. Taking cylinders up to 70" circ. x 89" face.



Model "HS" Grinding and Polishing Machine. Taking cylinders up to 38" circ. x 52" face.

FINISH YOUR CYLINDERS MIRROR SMOOTH THIS MODERN WAY

THE Ultimate IN PRECISION GRINDING - POLISHING

These machines are precision built in two standard sizes. Grinding and polishing is done with special "Intaglio" stones using water as a coolant, thus eliminating all dust. The resulting finish is finer than obtainable with paper and is completed in half the time. The grinding and polishing stones are mounted on a chuck plate which is attached to a spindle having a combination concentric and eccentric motion. The eccentric motion actually shears off the grain or roughness, leaving a smoother surface than is obtainable otherwise. The concentric motion combined with a special adjustable "floating" action is used for finishing the cylinder to a smooth, highly polished surface.

Each machine is completely wired and run on a semi-production basis before it is shipped to the customer. Extensive periodic inspections are carried on during this interval to assure years of trouble-free operation.

Additional details on "Intaglio" stones furnished on request.

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opposite ends of one of the printing cylinders are provided with yielding bearers which are in rolling contact with the other printing cylinder. The bearers are freely rotatable independently of their cylinder. Patent 2,724,331 by Harry P. Schmidt, assigned to H. H. Heinrich, Inc.

MULTI-COLOR PROOF PRESS

The forms of a multi-color set of printing forms are disposed in spaced relation on a longitudinal bed and a carriage carrying an impression cylinder to which a proof sheet is attached reciprocates over the bed. This produces printing conditions equal to those of producing printing presses. Patent 2,725,010 by David D. Vandercook, Edward O. Vandercook, and Raymond L. Pelland, assigned to Vandercook & Sons, Inc.

•

Binding, Cutting, Perforating:

COLLATING MACHINE

The machine has the advantage of an improved suction arrangement, allowing a variety of sheets, including the thinnest papers, to be handled individually. There is also improved pick-up and transfer arrangement, a delivery platform with means for applying adhesive to one or more sheets traveling on the platform, and accurate alignment mechanism. Patent 2,722,414 by Robert B. Smith, assigned to The Reynolds & Reynolds Co.

ADHESIVE APPLYING ATTACHMENT FOR COLLATING MACHINES

The attachment may be used on existing collating machines. It handles the adhesive in large quantities, saving refill time, meters the amount to be applied, and is easily cleaned. Patent 2,722,909 by John M. Riordan and Augustus J. Richards, assigned to Bonnar-Vawter, Inc.

MACHINE FOR APPLYING LEAF EDGES TO BOOKS

The machine is hydraulically operated and provides for clamping books by means of a plurality of wedges which are separately insertable between books in a plurality of parallel banks of books. Pressure in all of the banks is equalized while the banks are being simultaneously clamped in operative position. Patent 2,724,201 by John V. Cavalero.

•

Miscellaneous:

PROCESS FOR PRINTING ON PLASTIC MATERIALS

Ornamental designs, letters, and the like, are printed on plastic in accordance with the invention, whereby complete transfer of the ink takes place from plate to sheet and the ink penetrates into the surface of the plastic material. Patent 2,722,038 by Erich A. Freund.

PATENT SEARCHES

For Patent Research in the U.S. Patent Office, or a prompt estimate on any type of search, write
INVENTION, INC.
Munsey Bldg. Washington, D.C.

Former H.-S. Executive Dies—Wm. Guy Martin, a retired sales vice president for Harris-Seybold Co., died suddenly of a heart attack in California on December 21, 1955, at the age of 68. Martin had more than 40 yrs. of service in the Graphic Arts industry at the time of his retirement in 1951. He was regarded as one of the pioneers who helped to establish offset. In 1946 Martin went to San Francisco for Harris-Seybold. Following a siege of heart illness he retired in 1951 as Pacific vice president. He and his wife, Corinne, had recently completed a new home at 1083 Paseo El Mirador, Palm Springs, Calif.

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Conference Dates

(With Organization Name and Correspondence Officer)

American Photoengravers Assoc. —1956 Conv., Hotel Statler, Detroit, Mich., Oct. 8-10. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Rm. 430-A, Chicago 4, Ill.

ANPA Mechanical Conf.—1956 Conf., Statler-Hilton Hotel, Dallas, Tex., June 4-6. Mgr., ANPA Mechanical Dept., Richard E. Lewis, 370 Lexington Ave., New York 17, N. Y.

Book Manufacturers' Institute—1956 Meeting, The Plaza, New York, N. Y., April 5. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36, N. Y.

Fifth District Craftsmen's Conf. —1956 Conf., Hotel Cleveland, Cleveland, O., June 1-2. Secy.-Treas. Dave Walker, Adm. Asst., Graphic Arts Assoc. of Michigan, 320 W. Lafayette St., Detroit 26.

Graphic Arts Trade Assoc. Executives—1956 Conv., Edgewater Beach Hotel, Chicago, May 7-8. Secy.-Treas. Floyd Maxwell, LNA, 420 Lexington Ave., New York 17, N. Y.

Gravure Technical Assoc.—1956 Annual Meeting, Hotel Biltmore, New York, N. Y., Feb. 1-3. Secy. Len S. Pinover, Room 4800, 30 Rockefeller Plaza, New York 20, N. Y.

Great Lakes Newspaper Mechanical Conf.—1956 Conf., Schroeder Hotel, Milwaukee, Wis., Jan. 29, 30, 31. Secy.-Treas. Don Clark, Stereotype Supt., Grand Rapids (Mich.) *Press.*

Illinois Newspaper Mechanical Conf. —1956 Conf., Wolford Hotel, Danville, Ill. Sept. 28-29. Secy.-Treas. Arthur Kramer, Joiet (Ill.) *Herald-News.*

Intl. Assoc. Electrotypers & Stereotypers—1956 Conf., Hotel New Yorker, New York, N. Y., April 25-26. Exec. Secy. A. P. Schloegel, 701 Leader Bldg., Cleveland 14.

Intl. Assoc. of Printing House Craftsmen—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Exec. Secy. Pearl E. Oldt, Rm. 806, Transportation Bldg., 307 E. Fourth St., Cincinnati 2, O.

Intl. Graphic Arts Education Assoc. —1956 Conf., Santa Barbara College, Univ. of California, Santa Barbara, Calif., Aug. 5-10. Exec. Secy. Samuel M. Burt, 719 Fifteenth St. N.W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1956 Conv., Biltmore Hotel, Los Angeles, Aug. 12-15. Secy. Louis A. Croplis, American Type Founders, 555 Broadway, New York 12, N. Y.

Intl. Typographic Composition Assoc.—1956 Conf., Royal York Hotel, Toronto (Ont.) Can., Oct. 10-13. Exec. Secy. Frank M. Sherman, 1015 Chestnut St., Philadelphia 7.

Iowa Daily Newspaper Mechanical Conf.—1956 Meeting, Hotel Fort Des Moines, Des Moines, Ia., April 14-16. Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald.*

Kansas-Missouri Newspaper Mechanical Conf.—1956 Conf., Town House Hotel, Kansas City, Kans., Sept. 8 and 9. Kansas. Secy.-Treas. Larry Miller, Kansas Press Assoc., 701 Jackson St., Topeka, Kans. Missouri Secy.-Treas. William A. Bray, Missouri Press Assoc., 220 Walter Williams Hall, Columbia, Mo.

Lithographers National Assoc., Inc.—1956 Conv., Drake Hotel, Chicago, Ill., May 10-12. Exec. Dir. W. Floyd Maxwell, 420 Lexington Ave., New York 17, N. Y.

Mid-Atlantic Newspaper Mechanical Conf.—1956 Conf., Lord Baltimore Hotel, Baltimore, Md., March 8-10. Conf. Dir. Theodore A. Serrill, PNPA General Mgr., 300-312 Telegraph Bldg., Harrisburg, Pa.

National Assoc. of Litho Clubs—1956 Conv., Lord Baltimore Hotel, Baltimore, Md., April 20-21. Exec. Secy.

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Elton N. Baker, 833 N. Orleans St., Chicago 10, Ill.

National Assoc. of Photo-Lithographers—1956 Conv., Hotel Commodore, New York, N. Y., Sept. 19-24. Walter E. Soderstrom, 317 W. 45th St., New York 36, N. Y.

National Printing Equipment Assoc., Inc.—1956 Meeting, Statler Hotel, Los Angeles, Calif., Oct. 20-Nov. 1. Secy. James E. Bennet, 140 Nassau St., New York 38, N. Y.

National Safety Council Printing and Publishing Section—Staff Rep. James D. Saul, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Newspaper Mechanical Conf.—1956 Conf., Statler Hotel, Boston, Mass., Oct. 20-21. Secy.-Treas. Walter C. Crighton, Comp. Room Supt., New London (Conn.) *Day*.

New York State Capital District Mechanical Conf.—Dir. Floyd Laurenty, Schenectady (N. Y.) *Union-Star*.

Northwest Mechanical Conf.—1956 Conf., Radisson Hotel, Minneapolis, Minn., Feb. 18-20. Secy.-Treas. Ralph N. Carson, Linecasting Instructor, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis, Minn.

Pacific Newspaper Mechanical Conf.—1956 Conf., Biltmore Hotel, Los Angeles, Calif., Sept. 14-16. Secy. Fred Moyer, Sr., 6630 Mayflower Ave., Bell, Calif.

Packaging Institute Assoc.—1956 Conv., Statler Hotel, Cleveland, O., Sept. 10-12. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17, N. Y.

Printing Industry of America—1956 Conf., Statler Hotel, Los Angeles, Calif., Oct. 30-Nov. 2. Gen. Mgr. James R. Brackett, 719 Fifteenth St. N.W., Washington 5, D. C.

Research and Engineering Council of the Graphic Arts Industry, Inc.—1956 Meeting, Edgewater Beach Hotel, Chicago, Ill., May 9-11. Managing Dir. Robert E. Rossell, 719 Fifteenth St., N.W., Washington 5, D. C.

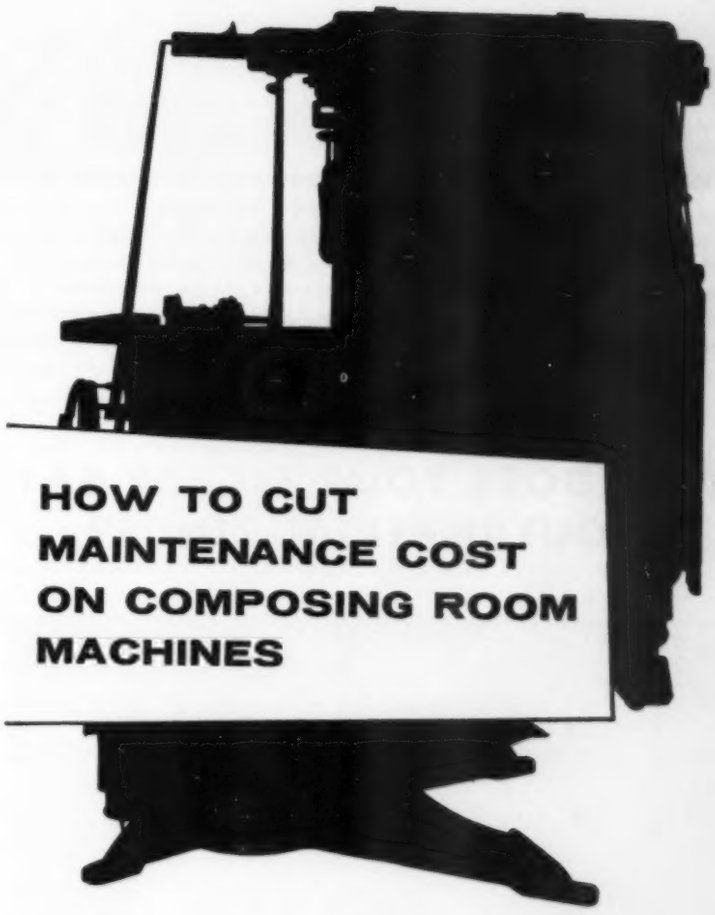
Screen Process Printing Assoc., Intl.—1956 Conv., Sherman Hotel, Chicago, Oct. 19-21. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf.—1956 Conf., The Dinkler Plaza, Atlanta, Ga., Aug. 19-21. Secy. John A. Hogg, Southern Newspaper Publishers Assoc., P.O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf.—1956 Conf., Statler-Hilton Hotel, Dallas, Tex., June 4-6. Secy. Walter Johnson, jr., P.O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assoc.—1956 Conv., Eola Hotel, Natchez, Miss., Apr. 12-14. Secy. Charles E. Kennedy, 1514 South St., Nashville 2, Tenn.

Technical Assoc. of the Graphic Arts—1956 Conf., Edgewater Beach Hotel, Chicago, May 7-9. Secy.-Treas. Phillip E. Tobias, 140 N. 6th St., Philadelphia 6, Pa.



HOW TO CUT MAINTENANCE COST ON COMPOSING ROOM MACHINES

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2. Buy Top-quality adjusting Metals
3. Use Top-quality Fluxes
4. Supervise your maintenance and re-melt practice
5. If (1) to (4) don't solve current problems, send for a Federated Service Man.

Needless to say, we think the answer to (1) is Federated Castomatic® Type Metals. They're made by a patented method and come out free of dross-producing oxides. You start clean. For item (2) we recommend Federated Mor-Tin Metal. Replaces dross pound for pound at minimal cost and holds up the casting quality of your metals. For item (3) we recommend Federated Savemet and Savaloy Fluxes. Items (4) and (5) are up to you, and we'll be glad to send the man on request.

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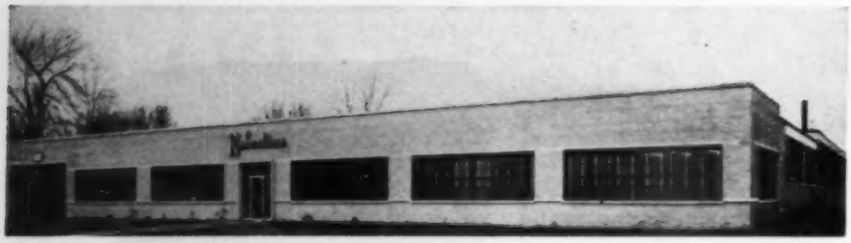

Robertson Photo-mechanix, Inc. launched its 39th anniversary year in 1956 by moving into a new $500 thousand building in Chicago. The company is moving into the modern one-story, 50,000 sq. ft. building, which was designed specially for production of cameras, printing frames, etchers and the photomechanical equipment. The new plant triples the firm's facilities. "We are also incorporating several new production processes in our manufacture of photomechanical equipment in the new plant," says Leonard S. Florsheim, jr., president of the company.

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REGULAR (Green Redibak) Meets requirements for all usual applications

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NEWS ITEMS

Colwell Press Consultant—Ira J. Hoffman has joined The Colwell Press, Minneapolis, Minn., as a general technical consultant for all offset phases of the firm's operation, according to Felton Colwell, president. Colwell said that Hoffman's initial project will deal with the further development of the firm's three-color printing process, known as Colwell Colour. For the past 18 yrs., Hoffman has been Graphic Arts technical representative for the Eastman Kodak Co., specializing in the field of commercial color production. One of Hoffman's outstanding accomplishments was the development of the Magenta Masking Method for all kinds of color reproduction.

Returns to Imperial—Imperial Type Metal Co. has announced the addition of Alfred R. McWilliams to the sales staff of its New York office. McWilliams who resides in Bloomfield, N. J., was with Imperial in the New York area prior to his recall to active duty in the Navy during the Korean crisis.

Huber Sales Organization—Earl Linn has been named Southeastern district sales manager and Olin Boone Eastern district sales manager in an expansion of J. M. Huber Corp.'s Ink

LINN

BOONE

Division operations. Linn will make his headquarters at the Huber, Georgia plant, while Boone's offices will be at divisional headquarters in Hillside, N. J., it was announced by Louis A. Lara, general sales manager of the division.

Art Gravure Appointments—The board of directors of the Art Gravure Corp., New York, N. Y., announced that William A. Pedersen, sales manager of the Commercial Sales Div., was made a vice president in charge of the branch. Pedersen has been with the production and sales staff of the company for 22 yrs. Henry T. Adcock, secretary of the corporation, was appointed assistant treasurer. Adcock has been with the company for 28 yrs.

Louisville Offset Plant—The formation of a new Louisville, Ky., offset printing plant, the Reynolds Foley Co., has been announced. Located on Taylorsville Rd. between Louisville

Capco REWINDER

- Rolls lifted from the bottom by hydraulic lifts. No overhead lift.
- Low splicing table at operator's side for easy accessibility.
- No shafts, no chucks with input and output roll center close to floor to minimize lifting and lowering.
- Slitter cuts damaged paper from full roll to ¾ size or ¾ to ½ size saving up to 75% of damaged roll.
- Rolls, out of round, can be rewound thereby increasing production by not having to slow press to accommodate jumping roll.

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The PRINTED sales-message has come into its own . . . because it's the BEST-PAYING advertising dollar.

More money spent on Direct Mail than on Television. TWICE as much spent on Direct Mail as on Radio. $451,000,000. MORE Direct Mail in 1954 than in 1950. (1955 will reveal STILL more and '56 . . . the sky is the limit)
$1,374,000,000. spent on Direct Mail in '54.

Is it any wonder that in three weeks recently, 181 firms ordered the NEW "Gold-Mine" BAUMFOLDER . . . to get the greatest possible profit in '56 of the most profitable printing . . . naturally, Direct Mail Printing (and it ALL has to be FOLDED . . and FOLDING is the most profitable of all operations).

It cuts. It scores. It perforates. It pastes.
(Will fold . . paste and trim 6,000 booklets an hour)

Printing is the *ONE* INDISPENSABLE INDUSTRY. (Way back Charles Dickens eulogized it as such and every thinking man knows it).

Over twenty thousand firms testify the "Gold-Mine" BAUMFOLDER is the ONE INDISPENSABLE AUTOMATIC in their plant.

It is our pleasure to offer the fabulous NEW MODELS on pay-for-itself terms . . . and every size priced at a fraction of what you'd expect for the closest-precision-built . . . life-time "Gold-Mines."

This is the HOUR of DECISION. Won't you accept one or more than one NOW, realizing how MUCH it will COST you to try to compete withOUT it, yet costs NOTHING to OWN it, because DAILY AND FOR A LIFE-TIME "it puts money IN thy purse."

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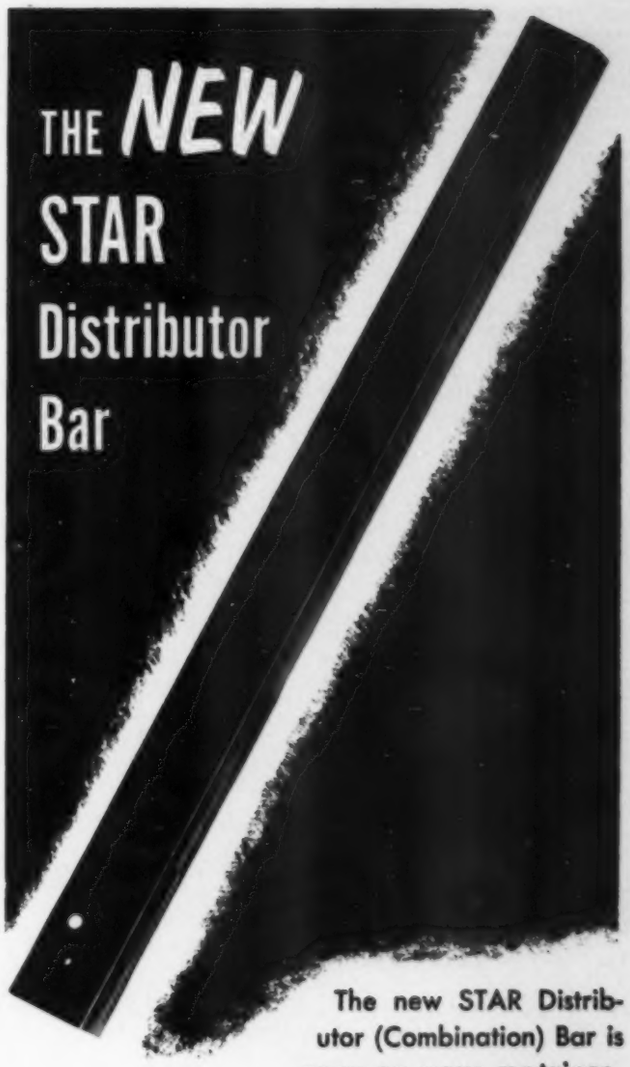
615 Chestnut St., Phila. (6) Pa.

14 x 20 17½ x 22½ 22 x 28 25 x 38 31 x 46 . . 60

THE NEW STAR Distributor Bar



The new STAR Distributor (Combination) Bar is easy on your matrices. Made of specially rolled steel, which is heat-treated for toughness, the STAR Distributor Bar features ground teeth. An exclusive grinding process assures a smooth-riding bar, without burrs and uneven surfaces to cause premature matrix wear.

Carefully broached tooth-combinations drop the matrices at exactly the right spot—no danger of "carry-over", resulting in expensive matrix damage and roof stops.

The STAR Distributor Bar is available for 5s, 8s, 31s and Comets. This STAR Part is a "combination" of economy and top quality manufacture. Order by part number G-204.

3261

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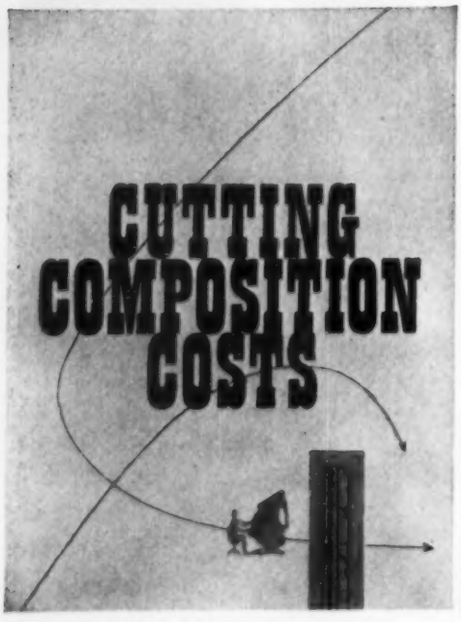
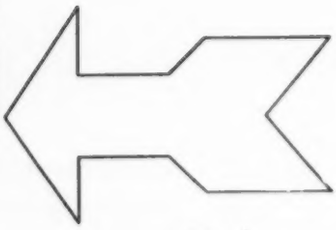
SOUTH HACKENSACK, N. J.

and Jeffersontown, the company will serve the advertising trade in the Louisville area. Officers are Stephen D. Reynolds, president, and Benjamin P. Foley, vice president and treasurer. Both Reynolds and Foley were formerly officials of the Fetter Printing Co. of Louisville.

Closes Notable Career—In November, 1955 Albert Bourges, passed away at the age of 73. At the time of his death he was chairman of the board of the Bourges Color Corp. which he founded. Bourges began his career in the Graphic Arts with the Chattanooga engraving firm of MacGowan and Cooke, and worked in print shops along the Mississippi from New Orleans to St. Louis. During those years as a "hobo engraver" as he liked to call himself, Bourges acquired a thorough grounding in all phases of graphic work in large and small shops. Sometimes he photographed the copy, sometimes etched the plates, did the routing, or proofed the plates. Sometimes when jobs were scarce he went out and brought in business. When necessary, he even collected the bills. In St. Louis he became a member of the Photoengravers Union. He worked there as a color finisher, and then moved on to Chicago and finally to New York where he set up his own engraving shop. His technical mastery brought him to the attention of a wide range of publishers, printers and advertising agencies who engaged him as a consultant. His chief interest was always color, and in 1918 he designed and produced a set of color charts that were used by such publications as *McCall's, Ladies' Home Journal,* and *Woman's Home Companion.* The four-color plates, which were personally etched by Bourges, offered a control heretofore impossible in checking process color work. He was also a consultant for *Time* and *Life* on color printing, and their original research in dry offset and electrolytic etching was done in his plant. Albert Bourges also rendered valuable service to the government. He worked with the Treasury Department as an engraver, as well as consultant on protecting the government against counterfeiting. Although a master technician, Bourges' most significant achievements were his inventions but he continually reminded everybody that the aim of those engaged in the Graphic Arts was not technical complexity, but rather how color reproduction could be made simpler so that more people could use it. Almost 30 years ago he developed the first art material specifically produced as a commercial art medium. This was the Shading Sheet that enabled artists to add benday patterns to their own work. Then as color moved into the foreground of the Graphic Arts, Bourges developed the products for which he is now best known—the Transopaque, Solotone, and Colotone materials. A common sense individualist of the old school, Bourges thought it ironic that artists should go to great lengths to mix colors, while the rest of the industry spent so much time and skill taking them apart. As a result, he developed a process whereby the colors are never mixed together, but are affixed on separate transparent color layers. This pre-separated art process eliminated the need for separation by the platemaker, one of the most costly and time consuming operations in color reproduction. The process is bringing color to many short run jobs where its cost previously has been prohibitive. The Bourges Corporation has been directed by H. Franklin Mayfield, president, and Bourges' daughter, Jean Bourges Mayfield, vice president in charge of art and promotion.



HERE'S
THE
ANSWER!



▶ *FOR THE COMMERCIAL PLANT*

▶ *FOR THE TRADE PLANT*

▶ *FOR THE NEWSPAPER PLANT*

The new 12 page illustrated booklet "Cutting Composition Costs" contains the answer to one of the most troublesome of composing room problems—the reduction of time, waste and spoilage incidental to the hand sawing of slugs. It explains in detail the many advantages of automatic slug sawing—with a Mohr Saw attached directly to the linecasting machine.

Mohr LINO-SAW COMPANY
8015 North Ridgeway Avenue
Skokie, Illinois

Mr. Composing Room Executive

Let this booklet tell you how efficiency can be increased and costs can be cut by automatic slug sawing with the Mohr Saw. Send today for your copy of "Cutting Composition Costs."

Appointment of Harvey F. George as its first research director has been announced by Gravure Research Inc. The organization, which for the past eight years has sponsored research projects at Battelle Memorial Institute, Columbus, O., is now setting up its own laboratory facilities where all future research activities of the group will be conducted, according to Oscar Smiel of Intaglio Service Corp., president of Gravure Research. Smiel said rising labor and paper costs, together with increased technical problems accompanying the rapid growth of gravure printing in the U. S., necessitated the expanded program. As the first research director, George will have responsibility for all research activities

GEORGE

of the organization, whose membership includes leading gravure printers, processors, and suppliers. The planned program aims at solution of a wide variety of technological problems, ranging from tone and color correction and other engraving problems, to cost reduction, and studies of pressroom equipment and operations.

George formerly headed the Graphic Arts research section of Mergenthaler Linotype Co.'s research division. He is a member of the Technical Assoc. of Graphic Arts, and of American Society of Mechanical Engineers.

PREUCIL

Joins Staff of LTF — Frank Preucil has joined the staff of the Lithographic Technical Foundation's Research Department. Appointment was announced by Wade E. Griswold, LTF executive director. Preucil has a background of production and research experience in lithography, photoengraving, rotogravure, collotype and silk screen process. According to Michael H. Bruno, LTF research manager, Preucil's immediate responsibility will be to supervise and expand the research that LTF is now conducting on evaluations of color separation methods and halftone screening methods. Preucil, the latest addition to LTF's Research Department, brings the total staff up to 22 people.

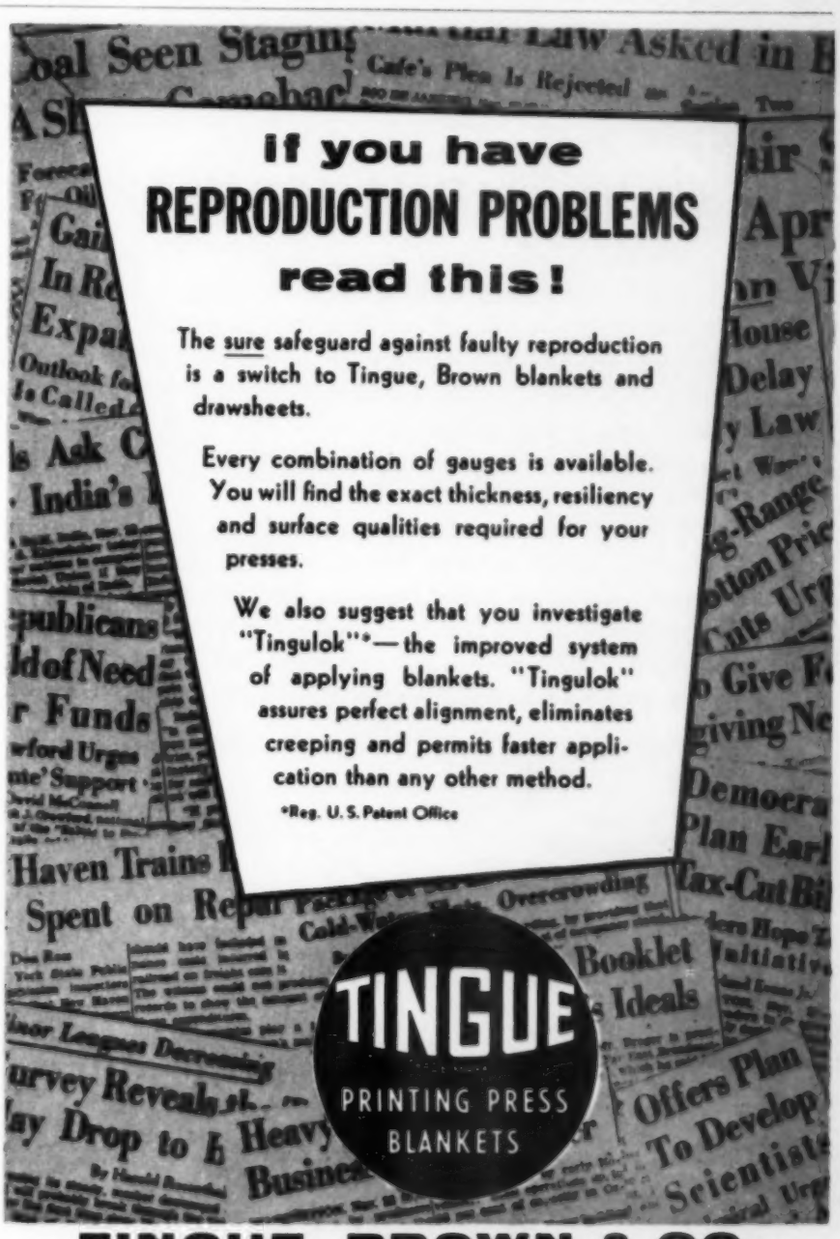
Advanced at Acme Steel—W. Sheridan Huss has been appointed president of Acme Steel Products Division, Acme Steel Co., announces G. Findley Griffiths, vice president in charge of sales for the company.

BUCUSS HUSS

Huss succeeds John G. Bucuss who retired as president of the division on Dec. 31, 1955. Bucuss will continue with the company in an advisory capacity. Huss joined Acme Steel in 1919 and had been vice president and general sales manager of the steel products division since last January.

Worthington Advances — Emory W. Worthington has been appointed vice president and general manager of George F. Motter's Sons according to an announcement by George F. Motter, president. Worthington, who joined the company in June 1955 as vice president of engineering, will now have charge of the sales, plant operation, and engineering divisions of the company. Prior to joining George F. Motter's Sons, he served five years with R. Hoe & Co., Inc. as chief engineer.

Goss Sales Increase—R. C. Corlett, president of The Goss Printing Press Co., during the 71st annual stockholder's meeting stated that sales for the fiscal year ending October 31 totalled $21,966,000 as compared with $17,498,000 for 1954. Corlett also stated that net earnings, after taxes, increased over the previous year and were approximately 7½% of net sales. New orders booked totalled over $33 million for the year. Directors elected in addition to Corlett were J. A. Riggs, K. Raymond Clark, C. S. Crafts, B. A. Graham, Mrs. L. W. Oliphant, M. E. Oliphant. New to the board, Graham is vice chairman of Sunbeam Corporation; Clark, attorney of Chicago, and Crafts, vice president of engineering of Goss. Officers elected in addition to Corlett are Riggs, executive vice president; Crafts, vice president of engineering; C. S. Reilly, vice president of sales; A. O. Holmberg, vice president of manufacturing; W. T. Goss, vice president; K. J. Williams, treasurer; Oliphant, secretary; and G. McCallister, assistant secretary. Corlett also stated there were increased sales of the company's affiliate, Goss Printing Press Co., Ltd. of England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REPRODUCTION PROBLEMS
read this!
The sure safeguard against faulty reproduction is a switch to Tingue, Brown blankets and drawsheets.
Every combination of gauges is available. You will find the exact thickness, resiliency and surface qualities required for your presses.
We also suggest that you investigate "Tingulok"*—the improved system of applying blankets. "Tingulok" assures perfect alignment, eliminates creeping and permits faster application than any other method.
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Canadian Sales Agents: ROSS WHITEHEAD & CO. LTD., Montreal, Canada

and two subsidiaries, Goss Printing Press Intl., S. A. and Goss Printing Co. Americas. Goss of England has a backlog extending into 1959 and are expanding plant facilities more than 50%. Increased plant and manufacturing capacity was accomplished during the year when the company purchased the Pullman Standard plant in Rockford, Ill. and added to its Chicago plant. An average of more than $500 thousand has been invested annually for new machine tools.

Space Added — The Bar-Plate Mfg. Co. has added 6000 sq. ft. to its existing plant. In addition to this, 1000 sq. ft. has been set aside in the office as a showroom to display offset equipment. All equipment will be hooked up for demonstration purposes and for actual use for prospective customers. The first two items that have been completed and tested are the Bar-Plate Deep Etch Down Draft Table and the Bar-Plate Utility Inspection Light.

Eastern Colortype Formed—The sale and transfer of the assets and good will of the Offset Printing Div. of the American Colortype Co. in Clifton, N. J., has been made to Leon Leighton, Jr. of Harrisburg, Pa., and Bruce Bayne of Greenwich, Conn. Operation of the newly chartered Eastern Colortype Corp. began January 1, Leighton will serve as president and treasurer. The New York sales office is located at 12 E. 44th St. Leighton is also president of both the Leighton Heel Co. of Columbus, O. and the Leighton Heel and Counter Corp. of Lynchburg, Va. He also owns the Leighton Fiber Products Co. of Columbus, O. and the Renton Heel Co. of Lynn, Mass. Bayne, who is serving as executive vice president of the new corporation, had been associated with the American Colortype Co. for the past three years.

"WHO WORRIES?

Nobody...

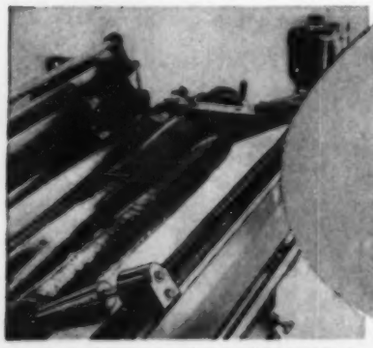
We bought Baldwin Agitators..."

"Yes, sir—take it from our customers, my boss and me, we're doing more, better quality work since we installed Baldwin Agitators."

"Neat, compact and engineered to each press, they work out of the way. That patented single rotating cone is easy and quick to clean, really mixes the ink and prevents any skin—force feeds the ink for a uniform flow that makes every sheet good. Powered with its own motor, it keeps working even when the press is shut down for lunch."

"I don't fill the fountain so often either, because the Baldwin doesn't waste ink. It's fine for short runs. I put less ink in the fountain—so we get started faster and spend less time cleaning up."

"One trial installation convinced us, and now we're 100% equipped—small presses and big ones alike. Yes, sir, my boss knew what he was doing when he ordered the Baldwins."



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MANUFACTURERS OF BALDWIN INK FOUNTAIN AGITATORS • BALDWIN VIBRATING ROLLERS

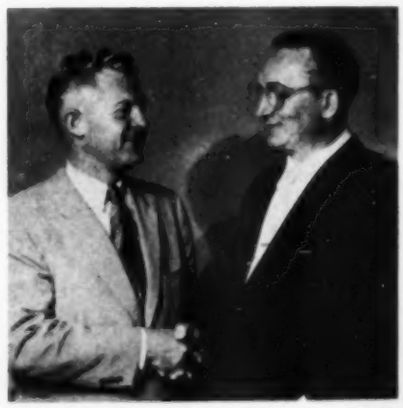
BALDWIN PRESS WASHERS • BALDWIN WATER STOPS • BALDWIN WATER FOUNTAIN LEVELS

PIA Section Appointment—Gerald A. Walsh has been named secretary and industrial relations director of the Union Employers Section of Printing Industry of America, Inc. Announcement was made by Walter F. McArdle, president of McArdle Printing Co., Inc., Washington, D. C. and president of the Union Employers Section of PIA. Walsh has his own industrial and labor relations consulting offices in Washington, D. C.

WALSH

Hamm Joins Vulcan—Vulcan Rubber Products Div. announces that Joseph E. Hamm has joined its staff. Before joining Vulcan, Hamm was connected with Magnet Litho Supply and Mar-Lynn Associates, Inc.

Plan Banner Year—Carl N. Becker (left) and Elmer M. Schwartz have planned a banner year for the Intl. Assoc. of Electrotypers and Stereotypers, Inc. Schwartz is president of IAES, while Becker is the immediate past president. Becker will head the



public relations committee for 1956. A former president, Walter C. Dohm, New York, N. Y., has been named chairman of the personnel relations committee. Chairman of the technical advisory committee is the association's first vice president, Walter C. Deye, Cincinnati.

Paasche President Elected—Walter G. Earle is the newly elected president of Paasche Airbrush Co., Div. of Cline Electric Mfg. Co. He succeeds Jens A. Paasche, founder and honorary chairman. The Paasche Airbrush Co. was acquired by Cline last year, and Earle, a vice president of Cline, has been executive vice president and general manager since the

Operation of the Offset Press

By Theodore F. Makarius

This 254 page book has been written especially for the man who must makeready and operate the offset printing press.

In this 254 page book are 25 chapters and 57 pages of Case Histories for overcoming specific troubles. Some of the chapters deal with: Setting the Pressure, Inking Rollers, Dampeners, Ink Fountains, Mounting Plate and Blanket, Split Fountain Printing, Drying Problems, Register Troubles and others. Included is a six page Ink Problem Reference Chart.

Color Charts are included. One of these demonstrates difference in cleanliness of color when mixing two inks which complement each other. Another color chart has been prepared to show the result of mixing different percentages of components.

Size 5¼ in. by 7⅞ in., 254 pages, 19 illustrations. Bound in gold stamped semi-flexible cover.

Price, per copy, $10.25 postpaid

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Printing Equipment Engineer

1276 West Third St. Cleveland 13, Ohio

New book *Color By Overprinting* enables printers to increase color work.

COLOR by Overprinting

By Donald E. Cooke

A guidebook in the art and printing techniques employing transparent inks in multiple combinations enables printers to get their share of increased color printing. It is a definitive work about solid-color overprinting with transparent inks and is one of the most complete texts ever written about multicolor line reproduction and pre-separated artwork.

The method is implemented with standard printing plates on standard presses by letterpress, offset, gravure and silk screen with your present equipment.

Color By Overprinting consists of 268 pages, sizes 8½ in. by 11 in.; 44 pages of illustrations; 165 pages of color charts with keyed numbers of inks employed to secure colors from 11 basic colors and black. Substantially hard bound. The text is fully annotated for artists, printers, engravers, art directors and editors in the book, magazine, packaging and Graphic Arts fields generally.

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(Please send remittance with order.)

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The Daily Tribune picks KEMP STEREO POT for dependable operation

Kemp Stereo type Pot in operation at The Daily Tribune, Royal Oak, Mich.

No pot breakage, less dross formation with Kemp equipment

Its stereo pot is a vital part of the Royal Oak, Michigan, Daily Tribune's operation. To minimize the danger of a costly breakdown, the Tribune chose a Kemp Stereo Pot.

Kemp has justified its purchase at the Tribune. Danger of pot breakage has practically been eliminated; dross formation has been reduced. And in addition, Kemp immersion heating units eliminate inefficient external burners—assure high melting rates, rapid temperature recovery after adding cold material, and save up to 40% on fuel. No wonder the Tribune, like all other Kemp users, is pleased with Kemp performance!

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When you specify the Nolan Full Page SuperCaster, you are assuring yourself of a steady flow of clean, low-cost stereotypes without delay or breakdown of any kind. This ruggedly constructed machine not only melts up to 1000 lbs. of metal quickly, it also offers an enclosed bottom pouring valve that is a leak-proof, freeze-proof and drip-proof, design that prevents burnouts or use of dross metal.

With balanced easy-rolling platen and convenient loading height, the Nolan SuperCaster contains all required safety features. Change from type-high to shell thickness quick and simple. Available in gas or electrically heated models, vacuum and water-cooled platens optional, also available in 5 and 6 column models. For complete information write to:

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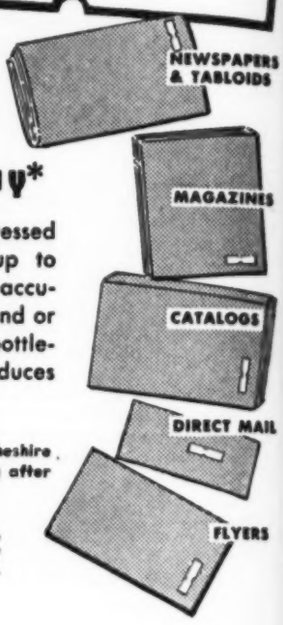

● Automatically attach addressed labels at operating speeds up to 18,000 per hour. Faster, more accurate than any other method, hand or machine. Opens mail room bottlenecks, maintains schedules, reduces subscription complaints.

100,000,000 mailings per month on Cheshire machines. Earlier models still operating after 27 years' constant use.

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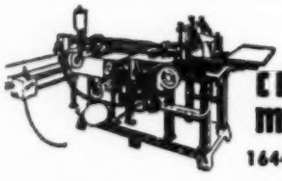


CHESHIRE MAILING MACHINES, INC.

1644 N. Honore St., Chicago 22, Ill.

merger. Announcement of Earle's promotion was made by Warren P. Scott, president of Cline.

Book Manufacturer Expands—Increased production capacity for the Brooklyn plant of George McKibbin & Son, book manufacturers, has been announced by Samuel Schulman, president. The company recently completed a major expansion in Brattleboro, Vt., where a one story plant of more than 100,000 sq. ft. was erected. Among the new equipment installed in Brooklyn are a two-up Sheridan liner and backer; a bank of Smythe number 12 sewing machines; a Dexter duplex folder; a Smythe number 24 casing-in machine with Smythe builder-in, and a Sheridan side-feed case maker.

Two Morrill Appointments — James H. McGowan has been appointed by the Geo. H. Morrill Co., division of Sun Chemical Corp., as sales agent for its newspaper inks in the metropolitan New York area. McGowan was a former production manager for the New York (N. Y.) *Herald Tribune, The Boston Herald Traveler* and the *PM and Parade*. Also appointed was Luther C. Paxton as sales representative for Morrill newspaper inks. Paxton will headquarter at Morrill's Chicago office and cover

McGOWAN PAXTON

Indiana, Illinois, Wisconsin, Iowa and the Michigan peninsula. Paxton was a former owner and general manager of the Shelbyville (Ill.) *News*.

Contract Signed for Press — Cecil Watkins, mechanical superintendent, signs the contract for a five-unit Goss Universal press for the Sidney (O.) *Daily News*. Looking on are William Pratt (standing), Goss salesman, and Vice Pres.-Sales C. S. Reilly. The Sidney *Daily News* also is getting a Goss Plate Perfector, Roll-O-Mat and other Goss stereotype equipment.

Headliners in Japan—Goss Printing Press Intl., S. A., a subsidiary of The Goss Printing Press Co., has licensed the Hamada Precision Machinery Co. of Japan to manufacture the Goss Headliner Press for the Far Eastern market. This action is a result of the purchase of a Headliner press by the Mainichi Newspapers which publishes one of the world's largest dailies, *Mainichi Shimbun*, with a total circulation of more than 7,500,000 in Tokyo and three other cities. Details of the Goss Hamada arrangement were negotiated by C. S. Reilly, presi-

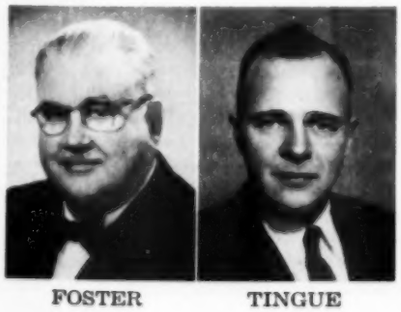
dent of Goss Printing Press Intl., S. A., and Paul Florian, secretary. William Hoffman, president of Ault & Wiborg, who represent Goss in the Far East will also represent the Hamada Company outside Japan. Hamada Precision Machinery Co., Japanese manufacturer of printing presses, has plants in Tokyo and Osada, with a total area of 150,000 sq. ft. and employing 700 men. The Goss Company will provide engineering, manufacturing and consultant service to Hamada.

RANDALL

Randall Succeeds Broadston — Ralph H. Randall has been promoted to New York district manager of Harris-Seybold Co., according to a recent announcement by Ren R. Perry, vice president of sales. Randall, who has been Harris - Seybold's Philadelphia district manager since 1953, will succeed T. M. Broadston, recently promoted to eastern sales manager for Harris-Seybold.

Alan Wood Steel Expands—To meet the steadily expanding demand of steel customers, Alan Wood Steel Co. has launched an expansion program which when completed will result in an increase of approx. 19% in steel making capacity according to Harleston R. Wood, president. The program will involve an expenditure of about $14 million over the next two years. This expansion will help meet the growing demand for Alan Wood's growing market for strip and floor plate products, according to Wood.

Tingue, Brown Officers—John W. Foster, president of Tingue, Brown & Co. for the past 18 years, was elected chairman of the Board of Directors at the annual meeting of the board of directors held in December 1955. William M. Tingue, who has been associated with the company since 1938, was elected president and



FOSTER TINGUE

treasurer. Michael J. Doyle, vice president, who is in charge of the mid-west operation, was re-elected to that office. The company also announced the election of Allison Choate, a partner in the law firm of Winthrop, Stimson, Putnam and Roberts, as a director. Choate succeeded the late Albert W. Putnam. James McLean, vice president of The City Bank Farmers Trust Co. was also reelected a director.

Altmann Heads Sales Service—C. W. Altmann, presently manager of the Product Service Div., Hamilton Manufacturing Co., has been advanced to the newly created post of sales service manager. This announcement was recently made by R. G. Halvorsen, executive vice president of the company. Altmann will continue to head up the operations of the Product Service Div. and will take on supervision of all customer sales service.

ALTMANN

Pope Resigns—Heidelberg Eastern, Inc. recently revealed the resignation of its executive vice president, Charles T. Pope, who completed a reorganization and development program begun when he joined Heidelberg in 1951.

Johnson Receives Award — Walter Johnson, former, SNPA manager, has received an award for distinguished service in journalism and for his devoted service to the Southern Newspaper Publishers Assoc. This Missouri Honor Award for 1955 is bestowed by the University of Missouri and recipients are chosen from a list of journalists, newspapers and magazines by a faculty committee and certified by the Board of Curators of the University of Missouri. As an ex-

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PLATE SAWS

With Exclusive Automatic Feed

For Photoengravers, Stereotypers, Printers

No more manual squaring up, guesswork alignment, tacking, scoring, beveling, trimming, removing burrs, using wedges. That's how a Rouse Plate Saw soon pays for itself.

Just make 4 quick, easy, automatic saw cuts and your plate is ready for the printer. The *exclusive* automatic feed guarantees each cut to be perfectly square, smooth-edged and uniform on any copper, zinc, magnesium or plastic plate, whether wood or plastic mounted or shellcast.

Cuts are made to Picas, Points, Quarter Points or Inches as required. Outside Mortising is effectively done to pica and point measurement.

NEW 24" MODEL—automatically cuts up to 24" of type-high work in only 27 seconds.

15" MODEL—identical to 24" Model except it automatically cuts up to 15" of type-high work in only 17 seconds.

BOTH MODELS occupy only 26" x 26" floor space.

NEW FEATURES (on Both Models)

1. Now you can make *cuts as small as 1 Pica square* for signatures, key letter or number changes, etc.

2. *Narrow Cut* measures about 2 points (.028"), permitting cutting between type lines.

3. Saw blades are changed in just 1 minute due to new lever-operated tension release. Blades stay sharp during 30-40 hours continuous operation. New blades are inexpensive.

4. New simplified gauge adjusting device makes it easier to maintain perfect squareness in cutting.

DESIGNED BY MEN WITH 25 YEARS KNOW-HOW IN BUILDING BAND SAWS FOR PRINTERS

Write for complete details TODAY!

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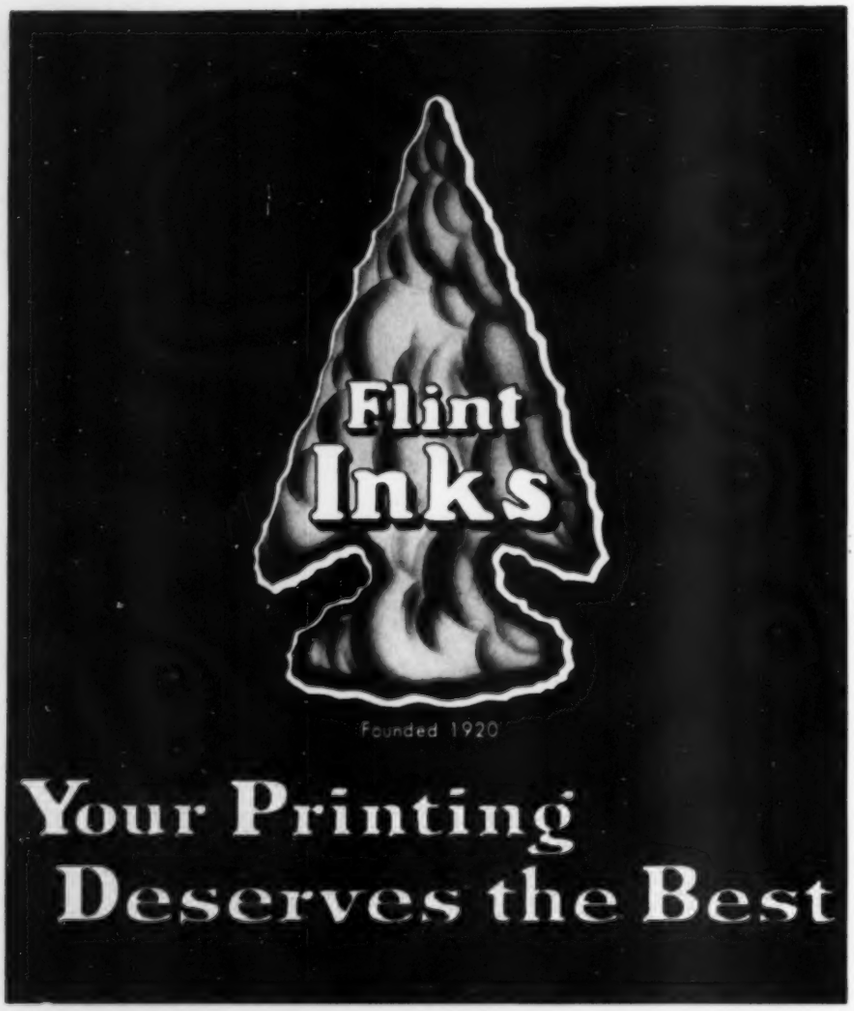
ROUSE PRODUCTS...The Standard of the World Since 1899

ecutive officer of the SNPA, Johnson assisted in bringing schools of journalism to their present high standards.

Company Name Change — Graphic Arts Machinery, Inc. announces that its name and address has been changed to: George Hantscho Co., Inc., 602 S. Third Ave., Mount Vernon, N. Y. George Hantscho remains as president and E. G. Ryan becomes vice president in charge of sales. Hantscho was associated with J. F. Webendorfer in the original Webendorfer-Wills Co., then became factory and general manager of the Webendorfer Division of American Type Founders. Ryan is president of E. G. Ryan & Co. and was formerly associated with the Webendorfer-Wills Co., and then became midwest manager for the Mt. Vernon Web Div. of American Type Founders. The new plant of the George Hantscho Co. is more than three times the size of the old plant. It contains an expanded, fully equipped machine shop. Office and engineering departments have both been enlarged. Rolf Hantscho, son of the president, is a member of the engineering department.

Heidelberg Eastern Showroom—Plans have been announced by Heidelberg Eastern, Inc., to occupy a new building at 73-45 Woodhaven Blvd., Glendale 4, L. I. Heidelberg Eastern, Inc., has signed a five year lease with renewal clauses extending over the next 18 yrs. The building was formerly occupied by the Brunswick Balke Collender Co. The property will give the Heidelberg organization 25,000 sq. ft. of space for office, showroom and warehouse operations. The building will serve as headquarters for Heidelberg sales service organization in New York, N. Y., Columbus, O., and Chicago. Occupancy is expected early in 1956.



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INDIANAPOLIS · LOS ANGELES · MINNEAPOLIS · NEW ORLEANS · NEW YORK · TULSA

Builds-in Books

(Continued from Page 33)

iron the hinges and dry the adhesive applied by the casing-in machine.

After being conveyed through the machine, the books are discharged and placed on carts or pallets, or mechanically conveyed to inspection and/or packaging.

Technical Details

The endless belts which move the books through the machine comprise essentially roller chains to which are secured rubber-faced steel plates (Fig. 2).

Each belt is made up of two endless chains moving, one above the other, in planes parallel to the floor. The plates are bolted at the top to one chain and at the bottom to the other. The rollers of the chains are equipped with needle bearings and ride against steel strips longitudinally fitted to cast iron beams (Figs. 5 and 6) about which the belts travel. The strips against which the chains are pressed by the books are of hardened stainless steel to withstand wear.

Belt-supporting rollers are secured to the inside of every third plate of the belt, (Fig. 2) these rollers riding the flanges of angles secured to the cast iron beam (Figs. 4, 5 and 6).

The beam supporting one belt remains stationary, while that of the other can be moved in or out (Fig. 3) to position the belt for handling books of various thicknesses. This adjustment is accomplished by a hand wheel (Fig. 1) which by means of worm gears and chain-and-sprocket linkages (Fig. 5) move the beam in or out. A short section of the stainless strip insert against which one of the chains of the stationary beam rides is unsupported and an indicator gauge (Fig. 1) is connected to this section. In setting up for a new run, the moveable beam is positioned until the gauge reads 0.003 in., this deflection resulting in the proper pressure for optimum results.

Adjustment for various book widths is accomplished by raising

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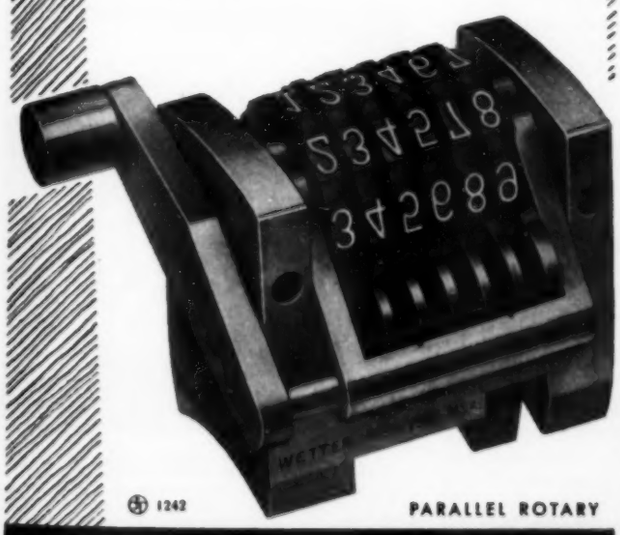

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and lowering the feeding and discharge tables at each end of the machine. This is accomplished by turning a hand wheel with which is operated a shaft running the length of the machine, the single shaft raising and lowering both tables simultaneously by worm gear arrangements (Fig. 3). Thickness and width adjustments for different size books are made in 2 min. or less.

One of the most important single elements of the machine insofar as the job being done is concerned is the nippers—the nippers which iron the hinges of the books (Fig. 1). The nippers are made up of two parallel sets of nichrome steel strips, each set comprising five strips joined together end to end by electrical conductors. These elements are spring loaded to give firm, constant pressure against the books. Two sets are supplied with each machine, a wide set and a knife-edge set. Custom made sets are available for special books. It takes but about 15 min. to change the nippers required for one style book to those required for another style.

Heat is provided by high current at low voltage, control thermostats, being factory set to provide temperatures of 200, 250, 300, 325, 350 and 375 deg. F. The thermostats can be re-set in the field if desired. A separate thermostat is provided for each temperature, a tap switch being employed to cut in the proper thermostat for the temperature desired. For example, if a nipper temperature of 250 deg. F. is required, the control is turned to the 250 deg. marking and the thermostat which automatically regulates the temperature at this point is cut in. The thermostat makes or breaks the circuit as the temperature drops below or rises about the 250 deg. F. mark. The set of nippers mounted on the movable beam moves in and out as the beam is adjusted for books of various thicknesses.

Power for driving the belts is supplied by a 2 h.p. motor located beneath the machine. The motor, through a gear reducer, drives a transverse countershaft located at the discharge end of the machine. The countershaft is supplied with pinions at each end which drive spur gears that in turn drive miter gears which operate the vertical shafts on which are mounted the horizontal belt sprockets (Fig. 4). The pinion on the countershaft on the movable side of the machine is long enough to mesh with the mating spur gear for the entire range of beam adjustment (Fig. 5). A clutch is provided for disengagement of the drive when it is desired to stop the machine without stopping the motor.

To take up any slack in the conveyor belts, wrench adjustments are provided at the feed end of the machine (Fig. 6).

As supplied with the machine, controls are panel mounted on one side. This panel, however, can be removed and remotely mounted if desired.

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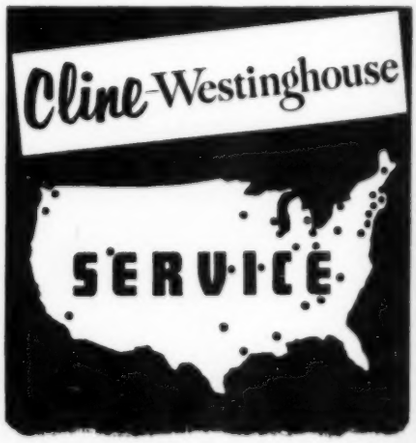
Equipment Sales and Installations

Reports

Miehle Installations

Brett Lithographing Co., New York, N. Y., commercial lithographing firm, recently completed plans for the installation of its second Miehle No. 76 Four Color Offset Press. When installation of the No. 76 is completed, Brett



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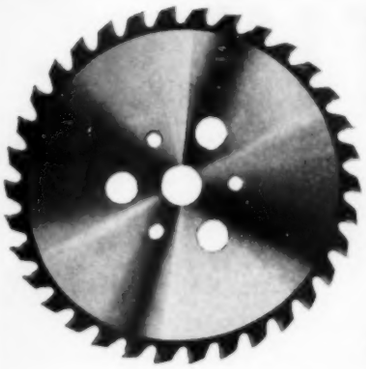

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will have in operation five Miehle No. 61 and No. 76 Offset Presses, consisting of 14 Miehle Offset units.

Lutz and Sheinkman, printing firm in the New York, N. Y. area, recently completed plans for the installation of its third Miehle No. 76 Offset Press. The new Four Color will augment production facilities which now includes two Miehle No. 76 Two Color Offsets.

•

Heidelberg Installations

A list of recent installations released by Heidelberg Western Sales Co., Los Angeles, Calif., included the following names: Printcraft Printing, Sacramento, Calif.; Lehigh Label Co., Daly City, Calif.; Grosjean's Stationers & Printing, Hayward, Calif.; J. D. Barriskill, Berkeley, Calif.; Bodine Print Shop, Turlock, Calif.; Tepper Printing Co., Denver, Colo.; Herb Morrison, Tucson, Ariz.; McNeal Printing Co., Phoenix, Ariz.; Jefferson *Record*, Lakewood, Colo.; ABC Printing Co., Las Cruces, N. M.; Hammond Printing, Livingston, Mont.; American Directory Publishers, Topeka, Kans.; Bonner Springs *Chieftain* Bonner Springs, Kans.; Mt. Ayr *Record News*, Mt. Ayr, Iowa; Union Printing Co., West Union, Iowa; Osterhus Publishing Co., Minneapolis, Minn.; Commerce Press, Los Angeles; Marcotte Printing, Los Angeles; Acorn Press, San Diego, Calif.; Cliff Strom, Printer, Van Nuys, Calif.; Robinson Printing & Stationery, Long Beach, Calif.; Hawaiian Mission Academy, Honolulu, Hawaii; and Alaskan Printers & Publishers, Anchorage, Alaska.

•

Wood Installations

The Providence (R. I.) *Journal* and the *Evening Bulletin* have placed orders for four additional Wood Metropolitan Color-Convertible Units, served by four Standard Three-arm Reels, four pneumatically-controlled 4-belt Stationary Strap Tensions, and four Electrotab Autopasters. Auxiliary equipment will include substructure, turning bars, reversing mechanism, double folder, etc. Daily papers average 46 pages for the *Bulletin*, 32 pages for the *Journal*, and 97 pages in the Sunday edition.

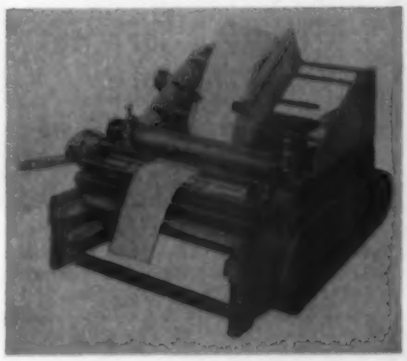
Equipment & Supplies

(Continued from Page 26)

ing. In addition, the Pacemaker Jr. is constructed with a Formica table top. Unit is actuated by a foot switch which starts and stops the machine's tipping action. With the Pacemaker Jr. maximum 12 in. by 12 in. sheets are handled. Minimum sheet is 4 in. by 4½ in. It is equipped with a.c. motor. For further details, please mention PEE No. 56 in your request.

Coating Machine

A Potdevin coating machine equipped with semi-automatic friction demand feed is announced by Potdevin Machine Co. Speed of delivery of coated materials is controlled by the operator. The machine, Model 2R, coats from a 1 in. strip to overall, on materials from tissue paper to index card, states manufacturer. It is also claimed that glue, latex, varnish, resin, paint and thermoplastics may be coated with the Model 2R. A coating regulator dial is used to control the thickness desired. The coating machine is adjustable for various label sizes, and is available in 6 in.,



9 in., and 12 in. widths. Minimum length of label handled is 2 in. Envelope flaps can also be coated with the machine. Tank roller and tank are removable for clean up. For further details, please mention PEE No. 41 in your request.

Address Label Machine

An automatic labeling machine which feeds, cuts, glues, and affixes 10,000 or more address labels per hour is being manufactured by Cheshire Mailing Machines, Inc. Envelopes, postcards, insertion cards, pamphlets, brochures, catalogs and other

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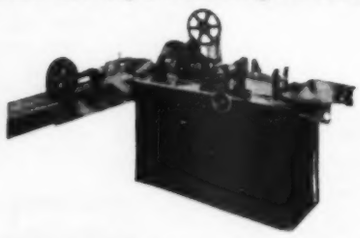
advertisting literature can be addressed with mechanical accuracy, it is claimed. It is also claimed high operating speeds are obtainable because of the rotary head which automatically feeds labels in standard roll strip or continuous form; or an Addressograph Electronic tape or I.B.M. 407 tape. Reloading of labels,



replenishing of glue supply, or reloading of literature can all be accomplished while the machine is in operation. The Models E or ER are used to accommodate mailing pieces from 3¼ in. by 5½ in. to 11 in. by 14½ in. The models are operated by one or two persons, and equipped with stacker for the completed mailing pieces, or with conveyor where town and zone separations are required. Gummed postage or premium stamps can be tipped on or applied by use of an interchangeable head. The unit, weighing 900 lbs., is mounted on casters for moving and is operated on regular 115 v. current. For

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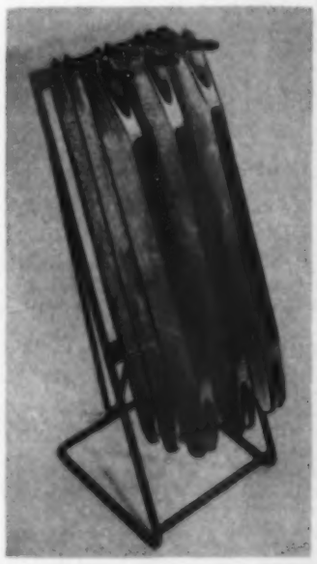
further details, please mention PEE No. 43 in your request.

Packaging Saw Products

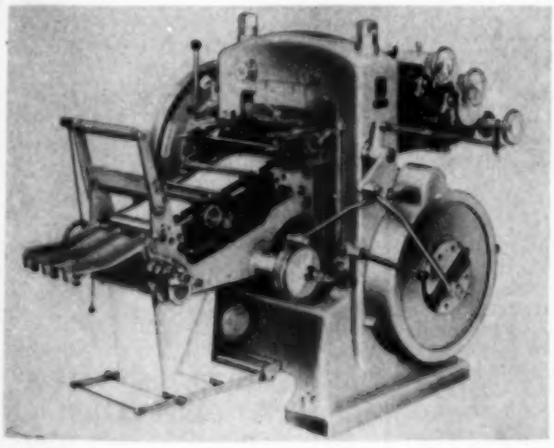
Packaging of saw bits and shanks, manufactured by R. Hoe & Co., Inc., has been changed from wood to fibreboard cartons, printed in two colors, green and white. Green predominates the cartons containing the bits and white that of the box containing the shanks. The fibreboard cartons are lighter in weight affording an economy in shipping costs. The shanks are in boxes of 25 and 50. The bits are in boxes of 100 and 250. There is also a box for packaging a single swage. For further details, please mention PEE No. 58 in your request.

Pig Storage Rack

The Bar-Rack Co. has developed a floor mounted rack for temporary storage of Margach style pigs in the composing room near line and typecasting machines. The rack will hold 12 pigs or approx. 288 lbs. of metal. The rack is constructed of rigidly welded ½ in. steel rod. One of the advantages in use of the rack is that stray matrices cannot lodge between pigs which are laid in a pile on the floor back of the machine. This method of pig supply also eliminates necessity for removal of pigs which are suspended on pegs on the mold gear area of linecasting machines when the machinist wants to make pot adjustments or repairs. Dimensions of the rack are 31 in. high by 11 in. by 11 in. The rack supporting rods are inclined backwardly at



an angle of 30 deg. from the front of the base to insure safety from accidental bumping or by bodily contact. For further details, please mention PEE No. 61 in your request.



Seal and Label Press—Printing Industries Equipment, Inc., recently announced the Viking Dominator Two-color Seal and Label Press. The press is equipped with an independently driven inking mechanism so that ink can be distributed while the press is being made ready. Other features are automatic lubrication, variable speed drive and 50 T. pressure. The Viking is equipped with a blanket heater and iris attachment. High speed claimed is 3200 i.p.h. Mention PEE No. 51 in your request.

Tray-Type Interfloor Conveyor

A fast tray-type interfloor conveyor that automatically loads, transfers and delivers heavy loads between as many as six floors was announced

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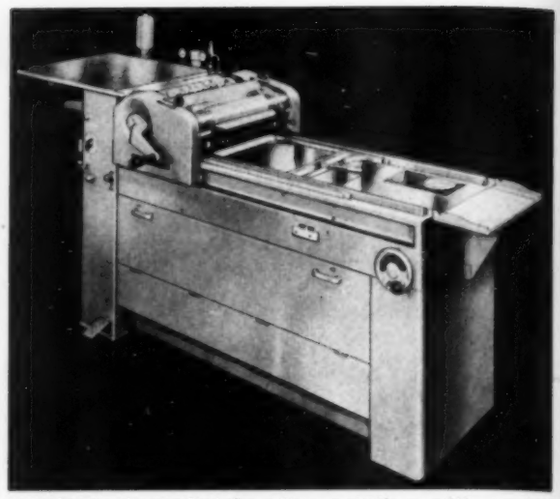
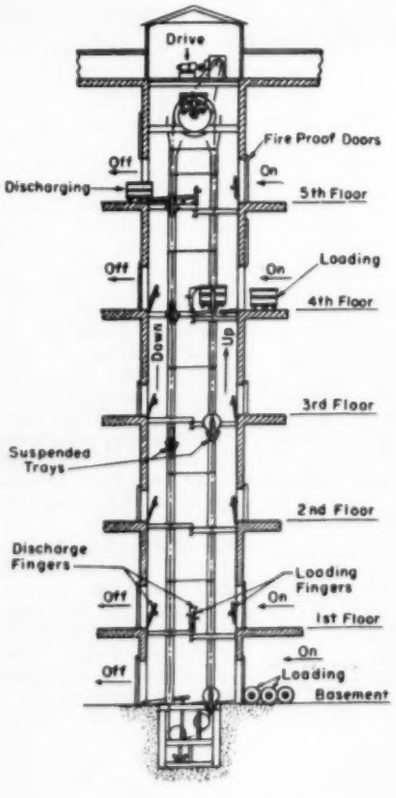
Vandercook Test Press—A hand driven test press for sheets up to 15¼ in. by 23 in. is now in production at the Vandercook & Sons, Inc. plant. Called the Vandercook 15-21 Test Press, it is constructed with a rigid, wedge type adjustable bed having a range of 0.034 in. Impressions of plates of various thicknesses or of forms on the bed or on galleys, can't be obtained on this press. Ink is automatically supplied by the Vandercook Ink Feed from a standard ink can in controlled amounts. The Vandercook Sprayset is used to automatically spray sheets immediately after printing with an ink setting solution. A second automatic cylinder trip is provided, making it unnecessary to travel the cylinder the full length of the bed when proving forms up to 14 in. long. Inking unit is equipped with a hinged plastic cover to guard operator from contact with the power driven inking rollers and to stop dust from settling on the inking system. Both the ink drum and the small compressor for the sheet spraying system are driven from the same ¼ h.p. motor. For further details, please mention PEE No. 54 in your request.



recently by Gifford-Wood Company. The conveyor is designed for installations where long interfloor transfer hauls of heavy loads present serious handling and cost problems. Resembling an elongated ferris wheel in its transfer sequence, the automatic system consists of: A tray type elevator conveyor, with trays spaced 25 ft. apart between two parallel roller chains; loading and unloading entrances at each floor, on opposite sides of the conveyor shaft; safety fire doors, side-sliding or up-sliding, at each entrance; automatic loading and unloading fingers at each station; and a complete set of operating and safety controls.

In operation, loads are picked up from entrances on one side of the shaft and are carried by trays over the top and down to the predetermined discharge station on the other side of the shaft. Trays move at a speed of 48 f.p.m., driven by a hydraulic electric unit housed at the top of the shaft. At the loading station the operator pushes the start button, and the conveyor tray is moved automatically into position. The loading fingers are used to automatically move the load onto the tray. The tray then moves up the shaft, over a series of chain sprockets at the top of the shaft and down the other side. Load is removed from tray by unloading fingers and deposited on platform at designated unload station. An electric mechanism at each unload station prevents pile-up of loads at platform; if passage is blocked by other loads, the electric eye stops the movement of the elevator and prevents unload until passage is cleared. For further details, please mention PEE No. 40 in your request.



Synthetic Press Roller

A synthetic printing roller, called Extron, is now in production at The Moreland Corporation. The synthetic

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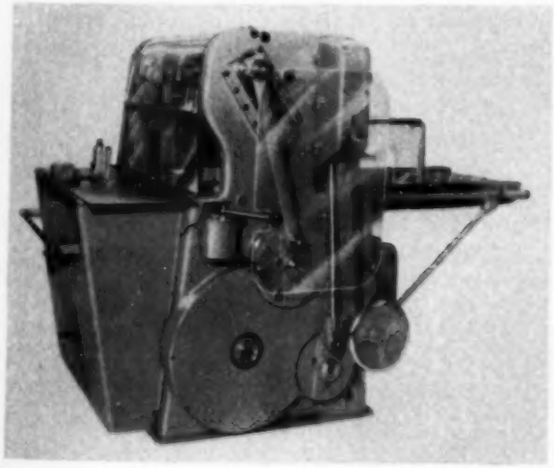
roller, a byproduct of the search for a tire that can outwear the automobile, has been field tested for two years without signs of wear or damage, it is reported. The Extron Roller now manufactured at the pilot plant of The Moreland Corporation will be distributed by six firms which hold stock in the firm. Virtually transparent, the roller is a light amber in color and it is claimed to be almost indestructible. Among the qualities claimed for Extron are: (1.) Three to four times abrasion resistance and more resistance to cutting or other damage; (2.) Smooth surface which makes cleaning easy; (3.) Better printing quality: (4.) Solvent resistance equivalent to the best Buna N compounds with the exception of alcohols and glycols (not a substitute

for Thiokol); (5) Non-meltable up to 300 deg. F., though not recommended for sustained services at temperatures above 150 deg. F.; (6.) Freedom from shrinkage in service, since extractable liquids are minimized in its compounding; (7.) Relatively flameproof and, when burned, the combustion products are non-toxic; (8.) Recovery from deformation (100% complete); (9.) Three times the tensile strength of rubber.

Since Extron's development more than two years ago, Moreland reports that rollers in use show no signs of wear so no one can estimate their life



Three-Knife Trimmer—The E. P. Lawson Co.'s automatic Series B 3-knife Rapid Trimmer is now in production as announced by D. W. Schulkind, president. An automatic two-up device is featured as standard equipment on the machine. Splitting the pile and trimming a lift of work bound two-up is accomplished in one operation. While one-half is trimmed on all three sides, the other half is automatically returned to the operator for completion. During the trimming operation the pile remains clamped in position. Trimming is by long shear angle guillotine knife action. Edition bound books, periodicals or pamphlets, one or two up, in lifts up to 4¾ in. high, in sizes 2 in. by 3⅛ in. to 11¾ in. by 16⅞ in. may be trimmed. Speeds from 12 to 25 piles a min. are controlled by the operator. An overload device is included as standard equipment on the Series B. Moving parts are enclosed for safety. A Plexiglass guard is supplied which permits the operator to observe the job being trimmed. The machine can be stopped at any point during the cutting cycle by the clutch release handle. An in-feed device with an adjustable gib enables the machine to automatically in-feed, clamp, trim and deliver the finished work to the conveyor belt for packing. For further details, please mention PEE No. 47 in your request.

Speed Flex ROTARY PRESSES SPEED PROFITS!

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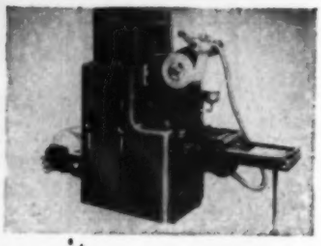


ORVILLE DUTRO & SON, INC.
117 West 9th St., Los Angeles 15, Calif.

NAME
ADDRESS
CITY ZONE STATE

WRITE FOR INFORMATION!
Designed and sold exclusively by Orville Dutro & Son. Made by Western Gear, manufacturers of gears and special machinery for industry since 1888.

CHAS. T. MAIN, INC.

Consulting Engineers Since 1893

ECONOMIC STUDIES, PROCESS STUDIES, DESIGN, SPECIFICATIONS
PROCUREMENT AND SUPERVISION OF CONSTRUCTION
FOR
NEWSPAPER AND PRINTING PLANTS

80 Federal St. Boston, Mass.
317 South Tryon St. Charlotte, N. C.

FOR SALE:

USED GOSS PRESSES
(16 UNITS)

- 3 double folders with double upper formers
- Cut-off, 23 9/16 inches
- Maximum web, 76 inches
- 2 under folder leads
- 2 permanent 4-page-wide color fountains
- 2 center color cylinders
- Cline type B reels

8 Units Available Now

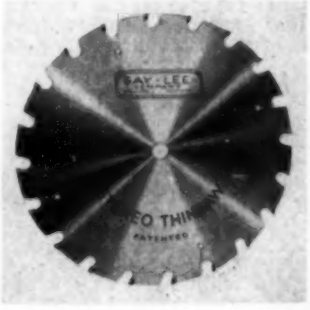
8 Units Available Early Next Year

TOLEDO BLADE
Toledo 4, Ohio

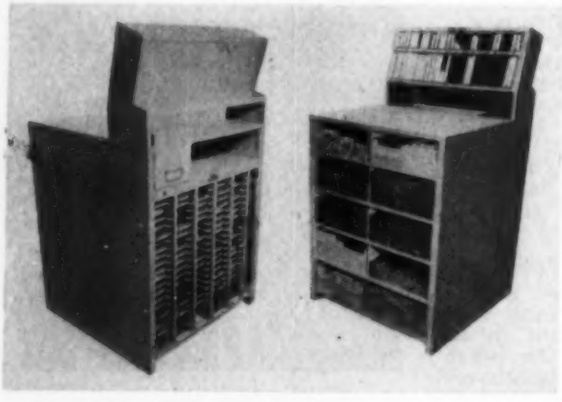
potential. At present, Extron rollers are used mostly in the letterpress field but because they are impervious to water, they have a vast potential in the offset field. For further details, please mention PEE No. 39 in your request.

Carbide Tipped Stereo Saw

Gay-Lee Company recently announced a saw blade specially developed for cutting and trimming stereotypes. Available in a range of sizes and number of teeth, the Gay-Lee Stereo Saw blades are steel with carbide cutting tips. The manufacturer



states that users are reporting Gay-Lee saws provide from 30 to 40 times the life between sharpenings of ordinary steel saws. It is claimed that metal does not build up on the sides of the teeth allowing cut surfaces to be free of burrs. It is also claimed the tips are secure for the life of the saw under normal conditions. Gay-Lee saws come in 8 in., 9 in. and 10 in. diameters. Each is available with from 20 to 80 teeth. For further details, please mention PEE No. 57 in your request.



Ad Frame and Galley Storage Rack—Designed to put 12 newspaper ad frames where 11 stood before, a new combined ad frame and galley storage rack is now in production at Foster Manufacturing Co. The frame is 31 in. wide by 33 in. deep by 57 in. maximum height. Working surface is at 40 in. level. At the top is the spacing material section for pre-cut leads and slugs, 6 picas to 34.3 picas in length. There is provision for 23 sizes in 46 compartments. The heavy solid iron working top plate is constructed with a dead metal well in the corner, which is easily dumped by removing hopper tray from rear. Also provided is storage for compositor's tools. Below are 10 storage bins, each 13¾ in. wide, for mounting base material. Two of these accommodate full page width material and are 15¼ in. deep while eight are 8¼ in. deep and are designed for base in widths up to 4 columns. In the rear of the frame is a full length galley storage. Four models are available for keeping pick up ads on galleys 23½ in. long. These can be used to store 180 single column galleys, 120 of the double column galleys, 80 three column galleys, or 60 four column galleys. Special combinations can also be made to order. Above the galley storage space there is a bin 15½ in. deep by 19½ in. wide for storing base material in full page widths. The equipment is finished in ripple gray and adequate toe room is provided on both sides for working convenience. Marking strips give identification of bin and storage space contents. For further details, please mention PEE No. 42 in your request.

New Futura Typeface

Intertype Corp. now offers Futura Extrabold and Futura Extrabold Oblique, thus further expanding the Futura family of type faces. Futura Extrabold is available in 12, 14, 18 and 24 pt. sizes duplexed with Futura Extrabold Oblique. Single letter matrices of the extrabold face are avail-

CLASSIFIED Advertising

ALL CLASSIFICATIONS

$.75 per line 1 9/16" wide. Minimum ad 5 lines. 25 characters per line. Cash with order.

CLOSING DATE—15th of Month preceding Date of Issue

We will forward all mail addressed to Box Numbers. When answering Box Numbered ads, address as follows: Box Number . . . PRINTING EQUIPMENT Engineer, 1276 West 3rd Street, Cleveland 13, Ohio.

DUTCH BRAND CUT TAPE STAR CUT CEMENT

The best cut mounting tape available anywhere at any price. Mounts any type of cut on metal or wood. Releases clean and free. Very thin with a real grip. Prevents bumping on halftones. You'll like it.

DUTCH BRAND CUT TAPE prices

In gross lots:

¼" rolls	$ .88
½"	1.30
¾"	1.75
1"	2.15

Costs little more in smaller quantities. All 36 yd. rolls.

STAR CUT CEMENT

Famous since 1936. Hundreds of users testify that STAR CUT CEMENT does a better job of mounting photoengravings, stereotypes and electrotypes. They know the value of a cement that permits mounting cuts quickly and securely. Be sure to use the PROVED cement—STAR CUT CEMENT.

85c per large tube—$6.75 per doz.
$6.25 per doz. in 2 doz. lots.
$5.25 per doz. in gross lots.

STAR CEMENT COMPANY
45 Malone Avenue
Belleville 9, N. J.

FOR SALE

Linotype Mats & Magazines. New mats now 28c. We have late faces like new priced at 35 to 60% of new cost. Write for listing. Foster Printing Equip. Co., 13th & Cherry Sts., Phila., Pa., Locust 8-2166

WANTED TO BUY

Need Lino & Ludlow mats. Send list & proof. Foster, 13th & Cherry Sts., Philadelphia, Pa.

FOR SALE

Ludlow Machine & Elrod-Rebuilt and guaranteed to be mechanically perfect $1950. each. Terms if desired. Foster Printing Equipment, 13th & Cherry Sts., Phila., Pa. Locust 8-2166

NO-MEL STOPS LEADING

Applied to mold wipers, concentrated No-Mel ends lead build-up on line-casting machine molds, mouthpiece, etc. $2.25. T & R Products, 3915 Wisner St., Saginaw, Mich.

RUBBER PLATES

Rubber plates for printing. Free Brochure, Flexography, Box 502, Great Neck, N. Y.

OPPORTUNITY

Active salesman with long experience in selling large two-revolution letterpresses is sought by European manufacturer for introducing and selling outstanding make on U. S. market with intention of building up a sales organization and a sales company in the U. S. For the right, above - average man, this is an unusual opportunity to build up a future. Good salary and conditions according to competency. Office and other facilities to be arranged by agreement. Please send immediately complete application to Box 538, this magazine.

POSITION WANTED

Engineer would like to take over sales and service of printing equipment as factory representative in northeastern territory, New York City headquarters. Reply Box 537.

WEB DRYING APPARATUS

for ROTOGRAVURE • WEB-OFFSET • ANALINE LETTERPRESS

B. OFFEN & CO.
168 N. Michigan Ave. Chicago 1, Illinois

PRECISION
***Flat-Ground* TURTLE**

Mirror-smooth, extra thick top, 24" x 28½". Is heavily ribbed to maintain accuracy. Adjusts from 36½" to 38½" working height. 5" x 1½" double ball bearing swivel type composition casters. Heavy-duty, rugged construction assures years of trouble-free service.

NOLAN *Corporation* Dept. 21 Rome, N. Y.

NEWSPAPER MECHANICAL EXECUTIVE

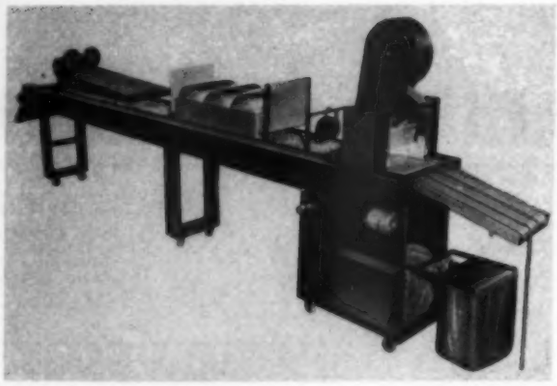
Address replies to:

Box 539

Large New York daily newspaper with history of continuing expansion is seeking a mechanical executive, age 40 to 50, who is thoroughly familiar with photo-engraving, composing room, stereotype and pressroom operations. Main responsibilities at the start will be in the field of quality. However, a man who has the ability and technical experience to coordinate the various aspects of printing production is needed. Salary $15,000 with liberal employe benefits and retirement plan. Write giving details of your technical as well as personal background. All replies will be held in strict confidence.

What Have You Devised? As a production and/or mechanical executive, our readers will be pleased to learn about something you have devised to improve plant operation. Just write informally to Editor, PRINTING EQUIPMENT *Engineer*, 1276 W. Third St., Cleveland 13, Ohio.

Cyclone Embossographer—Introduction of the Model 1C Cyclone Embossographer for sheets up to 15 in. wide is announced by Embossograph Process Co., Inc. Designed to fill the gap between Embossograph's existing raised printing machines for 12 in. and 20 in. sheets, the 1C is constructed with a triple dome radiant gas heater. Twin blowers in a fan tunnel are used for cooling. The unit is designed with a built-in ejection conveyor as part of its regular equipment to assist speeding out the sheets or cards at the far end of the machine. Right angle conveyors and extra cleaning blowers are also available for the 1C. For further details, please mention PEE No. 38 in your request.

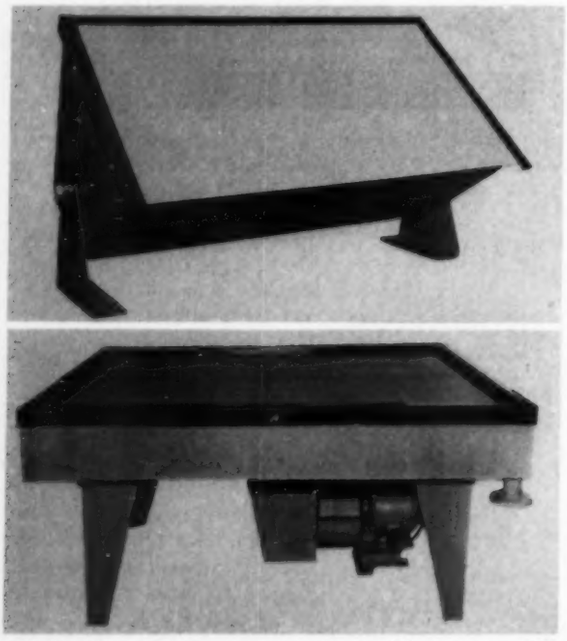


able in 18 and 24 pt. sizes. Intertype intends to make other sizes available later in 1956. For further details, please mention PEE No. 46 in your request.

It's *NEW!* Intertype FUTURA EXTRABOLD

Releasing Agent

Release-Cote, a releasing agent which prevents coatings from adhering to exposed surfaces, was recently announced by the Potdevin Machine Co. The inert releasing agent is a preparation which is said to prevent coatings such as glues, adhesives, paints, inks, and plastics adhering to walls of pots, ink fountains, journals, tanks, or any exposed surfaces. Release-Cote may also be used on the machine's moving parts to protect against splash, or where coating materials climb onto journals, rollers, and side scrapers. Operators can use Release-Cote on hands. Release-Cote will not burn. It is applied before filling time with rag, brush or spray equipment. For further details, please mention PEE No. 60 in your request.



Down Draft Table and Inspection Light — Two items of offset equipment recently announced by The Bar-Plate Mfg. Co., are the Deep Etch Down Draft Table and the Bar-Plate Utility Inspection Light. The Utility Light shown in the upper picture is manufactured in three sizes: 16 in. by 20 in., 20 in. by 24 in. and 25 in. by 26 in. The light may be used as an etching darkroom light for use in etching as well as for film, negative and positive inspection. The light is equipped with two brackets for installation on a desk, wall, over a sink or overhead. The 16 in. by 20 in. model is equipped with two 15 w. tubes, either two red safe fluorescent tubes or two white tubes. The 20 in. by 24 in. light is equipped with four 30 w. tubes. The light is constructed of heavy gauge steel. Working surface is of double strength opal glass. Glass is held in place by stainless steel angle irons. The table, finished in gray enamel, can be tilted to any angle.

The Bar-plate Deep Etch Down Draft Table, shown in the lower picture, is made in four sizes: 31 in. by 39 in., 42 in. by 50 in., 52 in. by 64 in. and 60 in. by 30 in. Other sizes are made to specifications. The Down Draft Table, for processing deep etch or multi-metal plates, is equipped with a permanently sealed Koroseal lining in the sink portion. Material is carried over the sides to allow for any drippage. The sink is equipped with a reinforced drain for washdown and removal of liquids. An exhaust fan is utilized to draw out hazardous fumes. The sink is made of heavy gauge steel, electric arc welded and reinforced. The legs of the table are recessed and are removable. The working surface is 1 in. polished slate. For further details, please mention PEE No. 37 in your request.

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J. A. PETREQUIN, Sales Promotion Manager, 1276 West Third St., Cleveland 13, O. Phone PRospect 1-0088.

WILLIAM L. OSBORN, Eastern Advertising Representative, 2709 Grand Central Terminal, New York 17, N. Y. Phone MUrray Hill 6-2068.

MELBURN O. SIMMONS, Mid-West Advertising Representative, 333 North Michigan Ave., Chicago 11, Ill. Phone DEarborn 2-6467.

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MAKE IT MODERN
WITH Hammond!
CUT COST ON ALL STEREO OPERATIONS WITH Hammond!
SCORCHERS
Dry your mats thoroughly and flat on a Hammond Scorcher. You will then have clear printing surfaces.
EASYKASTER
Three sizes: 5 and 6 col. with 400 lb. capacity pot and 8 col. with 800 lb. capacity pot. Enjoy easy, fast and continuous casting with a Hammond EasyKaster.
PLATESHAVER
Shave stereos and base accurate and flat for a uniform and clean impression. This eliminates undercasing or necking, or routing the backs of plates.
RADIAL ROUTER
Hammond Routers provide full page capacity at a constant routing speed. Also handy for mortising of shell plates.
TRIMOSAW
The Hammond Stereotyper Slider TrimSaw will quickly and accurately handle from the smallest to the largest type high stereo with finger-touch operation.

Hammond Machinery Builders

1604 Douglas Ave.
KALAMAZOO, MICHIGAN

How the FOTOSETTER saves **TIME** and **MONEY** In Newspaper Ad Production

When you produce ads the modern Fotosetter way, changes in type sizes are done with a slight turn of a dial. All white space is provided automatically. Scissors replace saws and routers. Finger-tip pressure is all that is needed to position photographic type and illustrations on the makeup sheet. Only a one-shot engraving is required.

This new Fotosetter technique *eliminates* all these costly operations:

1. Many magazine changes
2. Moving copy from one machine to another
3. Assembly of elements on the bank
4. Complex makeup on ad frames
5. Engraving or casting individual illustrations
6. Mortising, angular sawing, routing, and fitting
7. Break-up of forms, distributing, remelting

With a photo-composed ad all you have is a sheet of paper to file or forget.

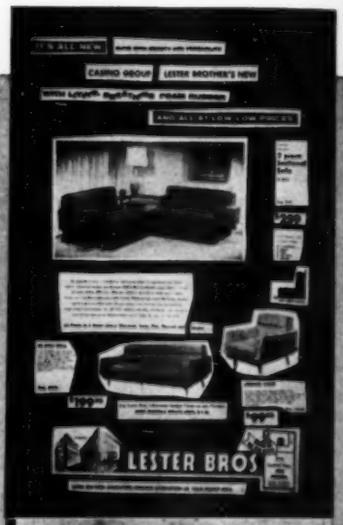
Look to Progressive Intertype for better composing room machines and methods.

Intertype Corporation

360 Furman Street, Brooklyn 1, N. Y.
Chicago, San Francisco, Los Angeles,
New Orleans, Boston
In Canada: Toronto Type Foundry Co.
Ltd., Toronto, Montreal, Winnipeg,
Vancouver, Halifax

Fotosetter is a registered trademark—Fotosetter Bodoni and Futura families

THIS FULL PAGE AD, typical of many regularly being set on Fotosetter photographic line composing machines, REQUIRED ONLY 22 PIECES OF PAPER which were quickly fingered into position.



Prepared the conventional way, this SAME ADVERTISEMENT TOOK 236 PIECES OF METAL TO MAKE IT UP. That took a lot of time and a lot of fitting and fussing.

Here is the pile that the 236 pieces of metal make . . . material which must be sorted, distributed and stored or melted. The Fotosetter eliminates these costly operations.

If it isn't made by Intertype it isn't a Fotosetter.